

RARE SPECIES CONSERVATORY FOUNDATION, INC.

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FORM: 990

TAX YEAR: 2020

PART III: STATEMENT OF PROGRAM SERVICE ACCOMPLISHMENTS

Mission and Scope: RSCF is a 501(c)(3), non-profit organization dedicated to preserving biodiversity through hands-on conservation programs rooted in sound science. RSCF employs the “flagship species” concept to identify and conserve high profile, priority species in order to leverage protection for the ecosystems they represent. Flagship species breeding and conservation efforts, along with field-based research, habitat protection and local capacity building, are directed toward long-term, regional-scale biodiversity preservation. RSCF designs sustainable recovery, reintroduction and protection programs for endangered species in the wild, and works collaboratively with governments and other conservation/research organizations to restore target species and protect critical habitats. RSCF also provides consulting and technical services to conservation teams, and forms educational, political and economic partnerships to expedite specific habitat and species conservation projects.

Please also see detailed descriptions of program activities at www.rarespecies.org.

I. 2020 Wildlife breeding and research activities-- highlights

The Red-browed Amazon parrot: The endangered Amazon parrot *Amazona rhodocorytha* is a top priority for long-term captive breeding and management, from which a sustainable, *in situ* recovery effort is evolving. RSCF holds the only breeding group in North America. The captive effort serves as a program platform to facilitate global management of the species and *in situ* conservation investment in Brazil. Fundação Neotrópica do Brasil and Parque das Aves in Iguacu, Brazil, initiated a comprehensive species assessment, including a final report on surveys from Minas Gerais and Rio de Janeiro. RSCF is contributing to this assessment by sharing husbandry, studbook and captive-population data, and invites collaboration from all Brazilian NGOs to ensure a global management and recovery plan for the species.

The East African Bongo: One of the most spectacular mammals bred at the Conservatory is the Mountain (or East African) Bongo, a large antelope facing extinction in the wild. The vegetation and climate at the Conservatory have proven ideal for propagating and researching this shy, forest-dwelling bovid. In 2003, RSCF implemented an inter-institutional project with the U.N. Foundation and U.N. Development Programme to establish an *in situ* breeding program for bongo in Kenya at the Mt. Kenya Wildlife Conservancy. Entitled ***Repatriation of Mountain Bongo Antelope to Mt. Kenya World Heritage Site***, this initiative represents the successful completion of the first of several conservation steps needed to reestablish a self-sustaining, wild population of bongo on Mt. Kenya and in the Aberdares and surrounding ecosystems, and stimulate a broad base of conservation program support for the Mt. Kenya World Heritage Site and Aberdares National Park and Conservation Area—both global-priority biodiversity areas. During 2020, RSCF provided operational support to the Rhino Ark Charitable Trust for the Bongo Surveillance Programme to ensure wild population protection and conduct research. RSCF/TCI formalized a collaboration with the Lewa Wildlife Conservancy as part of a new initiative entitled “RE-INTRODUCTION OF MOUNTAIN BONGO (*TRAGELAPHUS EURYCERUS ISAACI*) AND BLACK RHINOCEROS (*DICEROS BICORNIS MICHAELI*) TO MARANIA AND MUCHIENE FOREST OF MOUNT KENYA FOREST.” This program, championed by national government, Meru County Government, Community Forest Associations, Lewa Conservancy, Northern Rangelands Trust and partnering NGOs, will dedicate landscape and resources to reestablishing mountain bongo antelope and black rhinoceros across the northern slopes of the greater Mt. Kenya ecosystem. The project documents, site plan and Lewa-RSCF-FIU/TCI MOU are available from RSCF upon request.

Florida Bongo Ranching Program: During 2020, RSCF continued coordinating Florida-based bongo management with its principal partner, the Micanopy Zoological Preserve, to help maintain a healthy *ex situ* bongo population

and provide animals for repatriation and reintroduction in Kenya as necessary. RSCF developed the ranching initiative, which anticipates multiple *in situ* bongo management centers over the coming years. The ranches coordinate long-term breeding, management and surplus with RSCF and the International Studbook and contribute to *in situ* conservation via philanthropic support. All animal transactions are reported to the USDA and FWC in accordance with permit regulations.

Other in-house projects: During 2020, pygmy marmoset breeding was expanded to help recover the dwindling North American captive population, although the demographics of the population continue to pose significant, long-term challenges to recovery (male sex-ratio bias). RSCF maintains 10 family groups, including senescing animals, same-sex social groups and breeding pairs. RSCF's commitment to Golden-headed Lion Tamarins (*Leontopithecus chrysomelas*) and Golden Lion Tamarins (*Leontopithecus rosalia*) is unwavering and RSCF works closely with the population managers for both species.

Tropical Conservation Institute at Florida International University (FIU): RSCF and FIU formally teamed during 2014 to launch a broad interdisciplinary and international conservation platform named the Tropical Conservation Institute (TCI) under FIU's College of Arts, Sciences and Education (CASE).

A full prospectus for the Institute, including budget and program priorities, is available upon request. Please see <https://tci.fiu.edu> for details.

Overview—FIU Tropical Conservation Institute, Institute of the Environment

Building upon its history of excellence in conservation education and research, FIU has established the Tropical Conservation Institute (TCI). In partnership with the Rare Species Conservatory Foundation (RSCF), the Institute of the Environment in the College of Arts & Sciences addresses extinctions by empowering FIU graduates and conservation practitioners to protect ecosystems and species in the tropics and sub-tropics. TCI leverages FIU's broad portfolio of research, education, and outreach programs focused on tropical and sub-tropical ecosystems. FIU's geographic expertise in conservation extends from South Florida to the Caribbean, Central and South America, Africa, the Pacific and Asia. These regions comprise the top global biodiversity hotspots - areas of exceptional species richness facing extraordinary threats. TCI builds upon the years of innovative and successful conservation methods and programs developed by RSCF and combine them with FIU programs to position TCI on the leading edge of tropical conservation action, education, research and outreach. The scope of the partnership will position TCI to be truly transformative on a global level. Innovation is key for implementing real-time conservation action and training the next generation of conservation professionals here and abroad. TCI's novel academic platform delivers effective conservation education, training and on-the-ground programs — linking universities, practitioners and institutions dedicated to conservation.

Florida Grasshopper Sparrow: Despite the USFWS terminating the captive-breeding and recovery collaboration with RSCF in early 2019, RSCF continued to conduct intensive research into the epizootiology, characterization, transmission and population-level impacts of the *Isospora* coccidian ("*sparrei*"), amassing the largest PCR-test database (from collected fecal samples) of any North American wild passerine. Matthew Morris, an RSCF staff member and FIU/TCI graduate student, completed his Masters degree, focusing upon this new pathogen, in early 2021.

II. 2020 Conservation and Research Program Field Projects

Bongo Recovery program (see above)

Dominica program:

Please see RSCF's website for a comprehensive description of the Dominica Parrot Research and Conservation Program, which dates to 1997. Since catastrophic Hurricane Maria in 2017 and influence from outside parrot-collecting groups, the Dominica parrot-conservation program, overseen by Dominica's Forestry Division, has diminished. During 2020, RSCF and other credentialed conservation NGOs coordinated with Dominica's new

Minister of the Environment to implement new recovery measures for Dominica's endemic national birds. The Minister's commitment letter reaffirms Dominica's commitment to parrot conservation and reinstating collaborative research and recovery measures with outside NGOs, particularly RSCF. Negotiations with Dominica's Forestry Division and Ministry of the Environment are continuing, complemented by a coalition of international NGOs encouraging anti-trade and anti-trafficking measures to protect Caribbean islands' endemic wildlife.

III. RSCF Conservation Education Activities

In 2020, RSCF maintained relationships with domestic and international zoological institutions and agencies and expanded its web site (www.rarespecies.org). The site links to many conservation and environmental organizations, presents RSCF's mission and scope for all audiences, and discusses conservation initiatives in detail. The site is updated regularly, and provides access to in-house and published scientific papers, program documents and urgent conservation topics and issues. RSCF also maintains a real-time social media presence (e.g., FaceBook, Twitter, Instagram). In addition, RSCF staff in 2020 presented lectures, workshops and seminars to scientific and lay audiences (e.g., local universities, nature centers, international conservation meetings), and RSCF's board members served as academic advisors for graduate-level university students. Because of the Covid-19 pandemic, RSCF's 2020 onsite internship program was suspended and most field activities (except for the bongo recovery program in Kenya) were curtailed. Meetings, student advising and technical workshops were held virtually during most of the year.

IV. Media Development

In the course of implementing its conservation programs, RSCF generates a large amount of data, video footage, photographs, and technical narrative. Integral to the research effort itself, these materials also provide the basis for information sharing with scientific and lay audiences. RSCF compiles media resources into comprehensive reference libraries of imperiled ecosystems and species, including images and event histories that document project timelines in their entirety. Project-site host governments benefit directly from such media development, as lack the funds to document conservation activities *in situ*. RSCF's programs and field material are featured regularly in popular print and film, in addition to scientific publications for professionals. For example, RSCF's instrumental role in creating the world's first new national park of the millennium was presented in *Wildlife Conservation*, *National Geographic*, and *Palm Beach Illustrated*. Similarly, RSCF's work has been broadcast on *CNN*, *National Geographic Today*, and popular children's programs (e.g., *Jack Hanna's Animal Adventures*). The bongo recovery effort also has been featured on *CNN*, *BBC*, network U.S. television, the *New York Times*, multiple web news services (including *National Geographic* and *Time Magazine for Kids*), and over 30 newspapers across the U.S., Canada, Europe and Africa. RSCF's conservation programs are regularly featured in popular and scientific publications such as *Audubon Magazine*. Social media has enabled RSCF to efficiently reach a broad audience with day-to-day video posts, staff blogs and contributions, photos, real-time dialogue with field staff, and related news stories both in print and online.

V. Facilities

As a 30-acre facility, the Conservatory represents RSCF's international headquarters for wildlife conservation, which focuses on global biodiversity preservation. RSCF's interdisciplinary programs integrate applied field and clinical research on endangered species, propagation and management of critical, flagship species for repatriation and reintroduction, developing husbandry protocols for critical taxa, and implementing protected-area policies and strategies for long-term ecosystem conservation. RSCF also collaborates with scientific and governing authorities for wildlife in conservation hotspot zones, primarily in the tropics and neo-tropics, to develop tangible conservation solutions for imperiled species and habitats. The Conservatory in Loxahatchee serves as a captive-propagation center and research complex for endangered species, as it also provides a hub for international exchange and outreach to students, interns, collegial scientists and the general public. Please see RSCF's website at www.rarespecies.org for a detailed discussion about specific projects, organizational structure, and conservation strategies.

Digital Imaging: Thanks to a special grant, RSCF purchased a fully portable, Sound Eklon 1109G Digital Radiography System, to be shared cooperatively among local wildlife non-profit centers. The system comprises a suitcase-based computer and control system coupled to a digital imaging plate that allows both clinical and field-based x-ray imaging of small and large animals.

Board of Directors:

Paul R. Reillo, Ph.D., University of Maryland (Zoology). Field-oriented population biologist, ecological geneticist and environmental engineer. Rare Species Conservatory Foundation founder and president. Technical expertise in field ecology, demographic and genetic analysis of small populations and animal husbandry.

Richard D. Estes, Ph.D., Cornell University (Vertebrate Zoology). Behavioral zoologist and ecologist. Specialist in field studies of large African mammals. Species Survival Commission Chairman for Antelope Specialist Group of the World Conservation Union (IUCN); Earthwatch Scientific Advisor; Associate, Harvard Museum of Cultural and Natural History.

George Amato, Ph.D., Yale University (Biology). Director and Affiliated Professor, Sackler Institute of Comparative Genomics, American Museum of Natural History. Adjunct associate professor at Columbia and Fordham universities, research associate in the Ecology and Evolutionary Biology Department of Yale University. Conservation geneticist specializing in non-invasive sampling techniques for endangered species, and monitoring the trade in endangered species products using DNA-based forensic science.

Christopher Langen, Esq. Attorney, parrot enthusiast and conservation devotee, having traveled to 26 countries to view parrots alone. Fluent in four languages and provides both legal counsel to RSCF and international program perspective and expertise.

2020 Species List at RSCF, maintained under USDA, USFWS, and Florida FWC licenses:

Leontopithecus rosalia (Golden Lion Tamarin)
Leontopithecus chrysomelas (Golden-headed Lion Tamarin)
Cebuella pygmaea (Pygmy marmoset)
Tragelaphus euryceros isaaci (eastern bongo)
Amazona rhodocorytha (Red-browed Amazon parrot)
Amazona vinacea (Vinaceous Amazon parrot)
Amazona brasiliensis (Red-tailed Amazon parrot)
Amazona farinosa (Mealy Amazon parrot)
Amazona imperialis (Imperial parrot)
Pionites leucogaster (White-bellied caique parrot)
Aratinga guarouba (Golden conure)
Derophtus accipitrinus accipitrinus (Guyana hawkheaded parrot)
Pionites melanocephala (Black-headed caique)
Dromaius novaehollandiae (Emu)

2020 RSCF Physical Plant Inventory

- 30 landscaped acres, property and tangible-tax exempt (Palm Beach County, FL), fenced and cross-fenced (1.6 miles of 8' hi-tensile fencing; 1.25 miles 4-6' fencing)
- 16 interconnected hoofstock paddocks, with 8' gates,

loading corrals, pole barns for feeding stations, troughs, 9-stall CBS barn (with turn-out area)

- 1.5 acre mixed-species area, with 40 flights, including 14 walk-in, landscaped enclosures.
- 14 additional free-flight aviaries and stand-alone primate enclosures.
- 30'x12'x10' zoomesh primate enclosure
- 5 hurricane-proof bunkers (including, weaning, evacuation and workshop rooms)
- 3 hurricane-proof small animal breeding spaces
- 7 soft-sided outdoor aviaries
- aviary kitchen/ food prep room
- stand-alone commissary with staff facilities (600 sq. ft.)
- dishwashing building
- hay and grain storage buildings
- 2 stand-alone, reverse-osmosis water purification systems (separate buildings)
- Sound Eklon 1109G portable radiography system (housed at Rainforest Clinic)
- hurricane-resistant veterinary clinic, surgery and quarantine (1200 sq.ft.)
- personnel quarters, with separate intern/guest accommodation (1300 sq.ft.)
- meeting, staff-support and laboratory space (two buildings, 7000 sq. ft. total), including rearing laboratories
- technical equipment (e.g., incubators, brooders, video, computers, tranquilizer equip., respirator, anesthesia)
- workshop and tools (tractor, all-terrain vehicles, bushhog, mowers, trimmers, augers, sub-soiler, hand tools, welder, specialty fencing tools, plumbing, electrical supplies, rolling stock, 3 golf carts, etc.)
- multiple backup diesel and gasoline generators—stationary and portable.