

# Amphibian Ark

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## Annual Report 2022



Photo: Jaime Culebras

# From the Executive Director

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2022 was an outstanding year for the Amphibian Ark. Submissions for our Conservation Grants increased dramatically over the prior year and resulted in eight grant awards. The second George and Mary Rabb Fellowship was awarded and a paper co-authored by AArk staff entitled "Amphibians and conservation breeding programmes: how do we determine who should be on the ark?", was published in the journal Biodiversity and Conservation (<https://rdcu.be/c17Sr>). The husbandry Document library on the AArk website swelled to over 300 articles and AArk's quarterly newsletter documented the impacts of amphibian conservation breeding efforts around the world. Two webinar training series attracted over 270 participants and AArk participated in Strategic Amphibian Conservation Planning workshops for threatened species in Brazil organized by the IUCN, SSC, Amphibian Specialist Group – Brazil.

In an exciting new initiative, a former recipient of AArk Conservation grants and training courses in Argentina initiated country-wide efforts to raise the profile of amphibian conservation. With the addition of Dr. Federico Kacoliris at the Museo de La Plata, Argentina as a part time AArk staff member, we were able to greatly increase our visibility in Argentina, completing Conservation Needs Assessments (CNAs) for threatened Argentine amphibians and recruiting two new Argentinian zoos as amphibian rescue centers, targeting critically endangered amphibian species.

It's thanks to you, our donors, that AArk is able to continue moving ahead with amphibian conservation efforts for those species most threatened with extinction. We are deeply grateful for your support.



**Anne Baker**  
Executive Director





vision

The world's amphibians  
thriving in nature

amphibian  
ark



Ensuring the survival and  
diversity of amphibians,  
focusing on species that  
cannot be safeguarded in  
their natural environments

mission

# Collaborative Conservation Planning

Following a 2020 Conservation Needs Assessment workshop for Brazil's threatened amphibians, AArk, as part of a group collaboration, developed a series of online workshops to inform the creation of a Strategic Amphibian Conservation Plan for two of Brazil's threatened micro-endemic species— *Pithecopus rusticus* and *Nyctimantis pomba*—which occur, respectively, in Santa Catarina and Minas Gerais states. Planning followed the International Union for Conservation of Nature (IUCN) Species Survival Commission (SSC) Conservation Planning Specialist Group methodology, which was adapted to conform to the process of the National Center for Research and Conservation of Reptiles and Amphibians (RAN) of the Chico Mendes Institute for Biodiversity Conservation (ICMBio) - Ministry of Environment (MMA).

Partners included: AArk, IUCN SSC Amphibian Specialist Group in Brazil, RAN ICMBio-MMA, Vicosa Federal University, Sao Paulo Federal University, Zoo Sao Paulo, and Sao Paulo State Wildlife Conservation Center.



# Training

AArk continued building capacity around the globe through two AArk Webinar series that provided participants with access to experts in the field of assisted reproduction and nutrition.



The **11 webinars** delivered as a part of the **Amphibian Assisted Reproductive Techniques series** reached **70 participants** and included lectures on both frogs and salamanders delivered by 15 researchers. Topics covered included hormonal stimulation for gamete collection, gamete quality and viability testing, cryopreservation, sperm collection and artificial fertilization and using IVF for genetic management.

Our **Nutrition and Feeding webinar series** reached over **200 amphibian husbandry practitioners** from zoos and aquariums, universities, NGOs, and the private sector in **24 countries**. During the three-day series, professionals experienced in amphibian medicine and nutrition covered topics such as the basics of amphibian nutrition, the importance of carotenoids and vitamins, nutritional diseases, nutrient composition of insects, and establishing food colonies using native species.

For the second year in a row AArk staff delivered a talk on **Amphibian Veterinary Medicine** to **30 students** at the Congreso de Estudiantes Veterinarios del Ecuador (CEMVE).

AArk courses received high marks from participants, as well as requests for additional courses.



# Conservation Grants

This year our Conservation Grants program included a focus on species recommended for *ex situ* rescue by recent Conservation Needs Assessments in **Argentina** and **Brazil**. We awarded a total of **8 grants**: 5 start-up grants, 2 program extension grants, and 1 mentorship grant. Most of these projects are located in this year's focal countries.

## Start-up grants



Establishing captive breeding and husbandry protocols for *Atelopus hoogmoedi*, an analog species of the threatened Manauense Harlequin Toad (*A. manauensis*) in Brazil - **Cybele Lisboa**, Reserva Paulista - São Paulo Zoo, Brazil

Establishment of insurance population for *Pithecopus rusticus* - **Benjamin Phalan**, Parque das Aves, Brazil



*Ex situ* rescue of the Rancho Grande harlequin frog (*Atelopus cruciger*) in Venezuela - **Margarita Lampo**, Fundación para el Desarrollo de las Ciencias Físicas, Matemáticas y Naturales (FUDECI), Venezuela

First *ex situ* management actions for the conservation of *Ceratophrys ornata* in Argentina - **Sofía M. Perrone**, Conservación de Anfibios en Argentina (COANA), Argentina



Conservation of *Melanophryniscus estebani*: an endemic, poorly known, species from Chaco Serrano in Argentina - **Nadia C. Bach**, National University of San Luis, Argentina

## Program Extension Grants

Continuing captive breeding efforts for La Culata frog (*Aromobates durantii*) and the Mucuchíes frog (*A. zippeli*) - Enrique La Marca, REVA Conservation Center, Venezuela



Towards the conservation of the Darwin's blackish toad (*Melanophryniscus nigricans*) - Igor Berkunsky, CONICET, Argentina

## Mentorship Grant

Centro de Conservación de Anfibios Amaru and Detroit Zoo Mentorship Grant - Fausto Siavichay, CCA-Amaru, Ecuador



## The George and Mary Rabb Amphibian Conservation Fellowship



This fellowship supports early or mid-career amphibian scientists and conservationists in research-based professional development that furthers amphibian conservation. The 2022 fellowship was awarded to Dr. Rose Upton from the University of Newcastle, Australia for her project "Retention of genetic diversity of the endangered Littlejohn's tree frog through sperm cryopreservation".

This project uses the complimentary conservation approach of using assisted reproductive technologies (ART), such as sperm cryopreservation, in an endangered tree frog, Littlejohn's tree-frog (*Litoria littlejohni*) and a co-occurring threatened ground frog, the giant burrowing frog (*Heleioporus australiacus*), representing two of the three native Australian frog families. Developing effective sperm cryopreservation protocols may prove to be critical for some rapidly disappearing amphibian species.



# Outreach

Quarterly AArk newsletters, in both English and Spanish, provided updates on captive conservation programs around the globe. Program managers shared their successes, and occasional failures, so others could learn from their husbandry and reintroduction experiences.

Our website has continued to grow. Our Husbandry Document library now contains over 300 articles on topics ranging from enclosure size, appropriate lighting, and reintroduction. It remains the most-often-visited section of the website, providing a wealth of information for amphibian program managers.

In a presentation at the Third Colombian Congress of Herpetology in Cali, Columbia, AArk staff presented a summary of the advances that amphibian conservation programs have achieved in the last 12 years with AArk's support. The presentation reached over 300 participants, increasing their awareness of the types of support AArk offers to range country programs.



In 2023 we will be repeating the very successful Argentinian effort in Brazil, hiring two Brazilian amphibian experts to work with the Brazilian zoo and university communities, as well as with the Brazilian government, to implement recommendations from the Strategic Amphibian Conservation Action Plan and the Conservation Needs Assessment (CNA) recommendations. We're looking forward to continuing to expand amphibian conservation work in Brazil and in other regions around the globe.

We will also be collaborating closely with the Atelopus Survival Initiative (ASI) to perform CNAs for all harlequin toad species (genus *Atelopus*), many of which are threatened with extinction due to habitat loss and disease.

With this report, we also say farewell to Kevin Johnson, AArk's Taxon and Communications Officer from 2009-2022. Kevin retires from AArk to complete an Australian walkabout interrupted by Covid-19. He will be replaced by Dr. Rebecca (Becca) Brunner, who is excited to continue her contributions to amphibian conservation at AArk.

# Looking Ahead

# = # OF SPECIES





# 2022 Donors

It's only with the support of our generous donors that we are able to help secure a future for threatened amphibian species around the world.

## Our most sincere thanks!



### Up to \$50,000

Bernard & Nancy Karwick  
The George & Mary Rabb Fund  
Synchronicity Earth  
Brevard Zoo

### Up to \$10,000

Anne Baker & Robert Lacy  
Saint Louis Zoo  
Zoo Garten Leipzig

### Up to \$5,000

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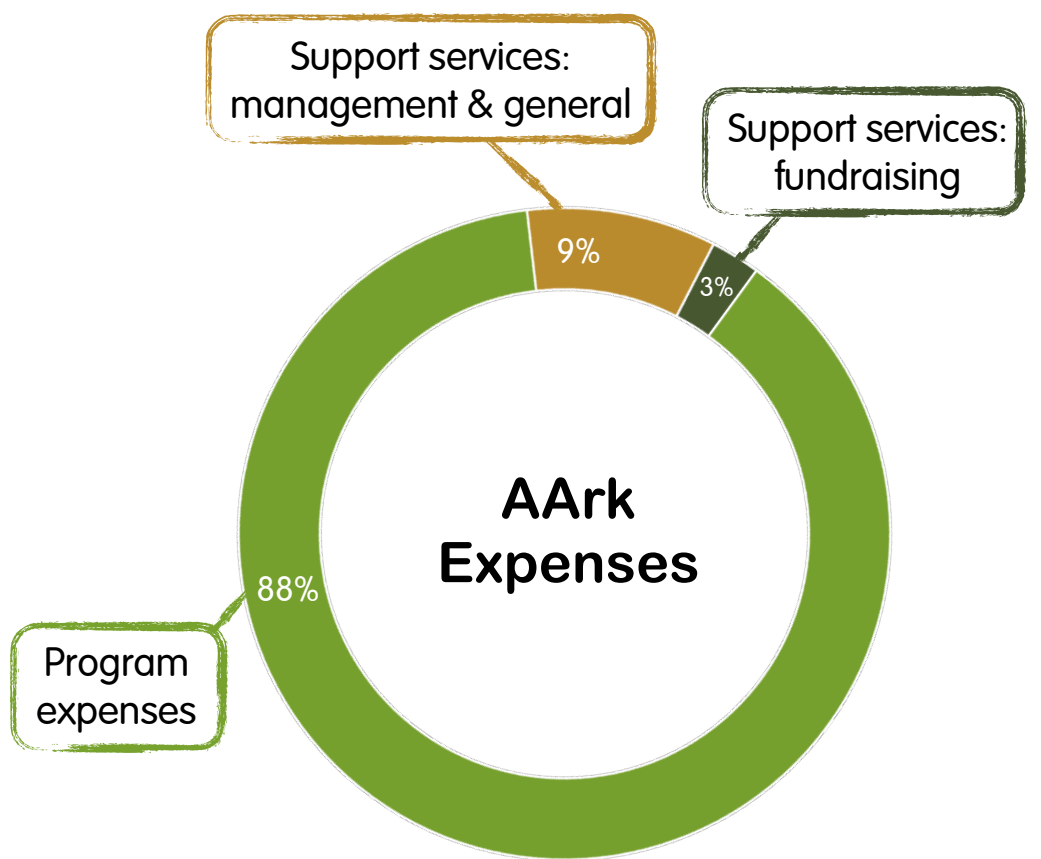
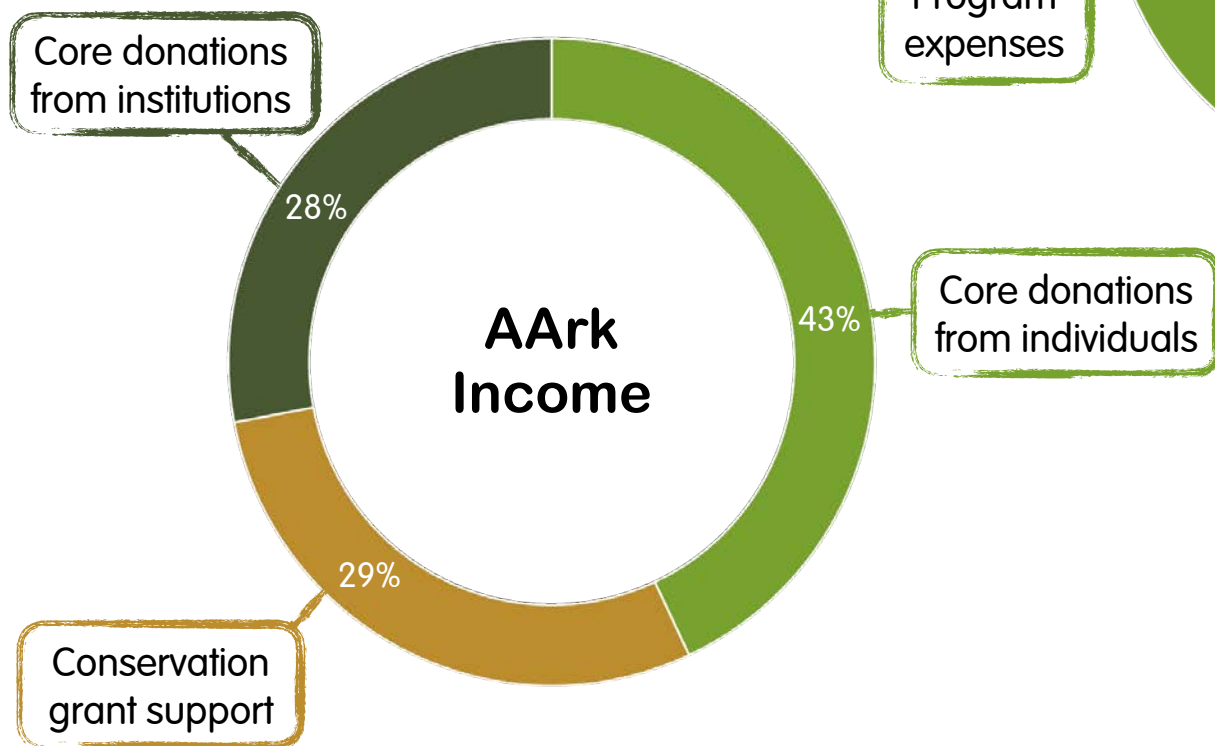
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# Financials



2022



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