

# Panama Amphibian Rescue and Conservation Project



## Who we are

The Panama Amphibian Rescue and Conservation

(PARC) Project is a consortium of like-minded partners working together to rescue and establish assurance colonies of amphibian species that are in extreme danger of extinction throughout Panama. We also focus our efforts and expertise on developing methodologies to reduce the impact of the amphibian chytrid fungus (*Bd*) so that one day captive amphibians may be re-introduced to the wild.

In 2005 the Houston Zoo established the El Valle Amphibian Conservation Center (EVACC) to house endangered amphibians

that were declining rapidly as a result of *Bd* in western Panama. The success of EVACC

and the need for expanded capacity to establish assurance populations of amphibians at risk in eastern Panama prompted new partners to build a second facility in Gamboa under the umbrella of the Panama Amphibian Rescue and Conservation Project. Partners include Africam Safari, Cheyenne Mountain Zoo, Defenders of Wildlife, Houston Zoo, Smithsonian Tropical Research Institute, Smithsonian Conservation Biology Institute and Zoo New England.



Fish-eye view from inside an amphibian rescue pod

### **The problem we are trying to solve**

*Bd* is a novel pathogen responsible for massive amphibian declines in Latin America, the USA, the Caribbean and Australia. In some mountainous sites of Panama about 50% of the species and 80% of the individual amphibians have disappeared. Declines in lowland areas are also evident, but are less pronounced.

### **Our strategy**

Panamanian species at risk of extinction were evaluated using an Amphibian Ark prioritization tool to identify the species in need of rescue. We seek to establish 4,000 sq ft of ex-situ space that will collectively house genetically viable assurance colonies of 20 species in two facilities in Panama. We are also working to develop a cure for *Bd* that will allow us to reintroduce captive-bred frogs back into the wild in places where they have been extirpated.

### **Our vision**

The Panamanian Amphibian Rescue and Conservation Project will be a sustainably financed, Panamanian-led organization that has stemmed the tide of extinctions caused by *Bd* and other threats to amphibians. We will lead successful recovery programs for Panama's endangered amphibians and serve as an exemplary model that can be replicated to address the threat of *Bd* to the survival of amphibians worldwide.

### **Successes to date**

Constructed one 2200 sq ft building (EVACC) and outfitted 4 rescue pods 1600 sq ft ex-situ space (Gamboa and EVACC) with advanced plans for second building in Gamboa.

- Established sufficient founding populations and bred 6 species: *Atelopus certus*, *Atelopus glyphus* (Gamboa) and *Gastrotheca cornuta*, *Hemphractus fasciatus*, *Strabomantis bufoniformis* and *Anotheca spinosa* (EVACC).
- Completed first cure experiments and established academic partnerships resulting in \$2m NSF grant to partners further investigating probiotics.
- Opened first amphibian exhibit in Panama at El Nispero zoo (EVACC).
- 1 hour documentary on Smithsonian networks and award-winning communications strategy including active social media constituency.

[www.amphibianrescue.org](http://www.amphibianrescue.org)

### **Our needs**

This capacity-building project urgently needs staff and facilities to conduct rescues, house and breed amphibians and to participate in applied conservation research. We are in need of funding to build facilities and to provide core salary support to 10 in-country staff. Our annual budget is \$300-400K. We also need equipment and volunteers with experience in amphibian husbandry.

## How you can help

**PARC Partners** play an active role in the support and governance of the project. Partners provide a minimum of \$20,000 per year in core support for the project for a minimum of 3 years. Partner benefits include:

- Membership on the PARC Steering Committee and direct input into strategic planning and development of project goals and objectives.
- Recognition on the PARC website, annual reports and in all national press releases.
- Access to communications materials that can be used to promote the Partner's role in the PARC program.
- Opportunities to have staff train with and participate in captive and/or field conservation efforts in Panama (travel costs and per diem covered by participating organization).

Current partners include: Africam Safari, Cheyenne Mountain Zoo, Defenders of Wildlife, Houston Zoo, Smithsonian Tropical Research Institute, Smithsonian Conservation Biology Institute and Zoo New England.

**PARC Sponsors** provide a minimum of \$10,000 per year in core support for the project, either in direct cash contribution or through indirect support as co-investigators on competitive grants or other in-kind contributions. Sponsor benefits include:

- Recognition in annual reports and in press releases and publications about specific activities directly or indirectly supported by the sponsor.
- Access to communications materials that can be used to promote the Sponsor's role in the PARC program.
- Opportunity to have staff train with and participate in captive and/or field conservation efforts in Panama (travel costs and per diem covered by participating organization).

Current donors include: USFWS, National Science Foundation, Maersk, Smithsonian Women's Committee, Mohammed Bin Zayed species conservation fund, and others.

**PARC Collaborators** provide direct or indirect annual financial support of less than \$10,000 per year, but nevertheless provide tremendous added value to the PARC project. For example, Amphibian Ark training has played a critical role in training PARC's Panamanian staff. James Madison, Vanderbilt and Virginia Tech Universities are collaborating with PARC to develop a *Bd* cure, and Roger Williams Park Zoo and Toronto Zoo help to build and run insect production facilities. Collaborator benefits include:

- Recognition in annual reports and in press releases and publications about specific activities directly or indirectly supported through collaborations with PARC.
- Access to communications materials that can be used to promote the Sponsor's role as a PARC collaborator.
- Opportunity to have access to PARC's captive collections in Panama, participation in PARC-led field expeditions, and access to specimens and other data, as appropriate to support collaborative efforts.

**PARC Volunteers** play an integral part in the project and over 40 local and international volunteers last year provided the equivalent support of two full time employees. Volunteers with husbandry experience from places like the Bronx Zoo, Henry Doorly Zoo and Atlanta Botanical Gardens have been an invaluable source of collaboration.



Learn more: [www.amphibianrescue.org](http://www.amphibianrescue.org)

Contact: Steve Monfort, Steering committee chair [monforts@si.edu](mailto:monforts@si.edu)

Brian Gratwicke, International coordinator [gratwickeb@si.edu](mailto:gratwickeb@si.edu)