Amphibian Ark

- Awareness
- Fundraising
- Conservation
  - Taxon prioritization & management
  - Husbandry/Conservation workshops
  - Building partnerships/capacity/rapid response
  - Research & Reintroduction

www.amphibianark.org
Amphibian Biodiversity
# Threatened Amphibians

<table>
<thead>
<tr>
<th>Region</th>
<th># of threatened taxa</th>
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6/10 of Th species are Latin American
Critically Endangered Amphibians

<table>
<thead>
<tr>
<th>Region</th>
<th># of CR taxa</th>
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<td>North Asia</td>
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3/4 of CR species are Latin American
Map of the world's ecozones

NEARCTIC

NEOTROPICAL

AFROTROPICAL

PALAEARCTIC

INDOMALAYAN

OCEANIAN

AUSTRALIAN

ANTARCTIC
Disease Spread: Costa Rica & Panama

1987

1993

1996

2002

Nov. 2004
EVACC: the El Valle Amphibian Conservation Center

- ~225m²
- exhibits
- off-exhibit
  - breeding
  - research
Funded by: Government of the Commonwealth of Dominica and
Zoological Society of London (ZSL)

Client: Ministry of Agriculture Fisheries and the Environment

Mountain Chicken Conservation Project
At
Botanical Gardens, Roseau, Commonwealth of Dominica

Contractor: Elliot Construction
Architects: Ministry of Public Works & Infrastructure Development
Engineers: Ministry of Public Works & Infrastructure Development
Quantity Surveyor: Ministry of Public Works & Infrastructure Development
Balsa de los Sapos

- Pontificia Universidad Católica del Ecuador
- Luís Coloma, Ph.D.
- partial sponsorship by St. Louis Zoo
• Omaha-Johannesburg
• Zurich-Cali
Emerging Wildlife Conservation Leaders

• “The Amphibian Project”
• www.helpafrog.org
• CI, Disney, DOW
• SI, WCS
This medium-sized rain frog, or true frog, is native to West Africa. The Ivory Coast Frog prefers to inhabit inland primary forest. Because the frog's habitat is in demand for growing crops and building homes, this species is now listed as endangered.

January

<table>
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Take Action: Look, listen and learn. Educate yourself and your family about amphibians.

After thriving for over 360 million years, one third to one half of the world's approximately 6,000 known amphibian species could go extinct in our lifetimes. Earth is facing the single largest mass extinction since the disappearance of dinosaurs.

The Panamanian Golden Frog is the national symbol of Panama where this species is endemic. This toad is a symbol of good luck or “suerte ase” in its homeland where it is represented by brightly colored clay or gold charms called Juacas. This species lacks lungs and communicates by using its hands. This toad has disappeared from all but a handful of the localities where it was once abundant. It is Critically endangered and in some being bred in captivity until a time when it can be reintroduced into the wild.

Panamanian Golden Frog (Anotheca scutula)
Photo: © David B. Mindell

The Amphibian Project in partnership with

amphibian ark
2008 Year of the Frog
Taxon Prioritization

- AArk prioritization tool developed in Panama
- Applied by EAZA in Europe, Madagascar
- checked by ARAZPA in Australia
- AArk
  - USA, Canada, Caribbean
  - Costa Rica, Mexico
  - Venezuela, Colombia
  - Malaysia, Hong Kong, Thailand
  - South Africa
  - Cameroon
  - Indonesia
  - Peru, Panama
b) Program Considerations

4. Threat mitigation: How potentially reversible are the threats currently facing the taxa in the short- to medium-term?
   - Prospect that threats can be reversed within 1-5yrs: Score 20
   - Prospect that threats can be reversed within 5-10yrs: Score 12
   - Threats may be reversible in unknown time frame: Score 4
   - No prospect of threat reversal: Score 0
   - Threats unknown*: Score 0

   *Convey research need to ASG

5. Primary Conservation role: What is the primary conservation role of the target taxon? (as defined in Q.1/Appendix 2) N.B. Taxon may have more than one role, but only score the primary role:
   - Ark: Score 20
   - Rescue/Supplementation: Score 14
   - Conservation Research: Score 10
   - Farming: Score 6
   - Conservation Education: Score 0

c) Taxon Considerations

6. Extinction risk: What is the current IUCN Red List category for the taxon?
   - Critically endangered: Score 20
   - Endangered: Score 16
   - Vulnerable: Score 12
   - Data deficient*: Score 8
   - Near threatened: Score 4
   - Least concern: Score 0
<table>
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<tr>
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<td>Rana cerigensis</td>
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<td>Y N N N</td>
<td>4 14 16 3 0 0 0 0 0 0</td>
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</tbody>
</table>
Taxon Prioritization

• first list – for biosecure facilities with permits
  – determine what needs immediate captive sanctuary

• second list – private sector
  – ED/LC
  – surrogates
Taxon Management

• natural history
• management rex
  – founders (20-100)
  – group size (200-6000)
  – individuals vs. groups
  – record keeping
which is more important?
permanent isolation

• no more “quarantine as usual”
• regardless of purpose in captivity, nothing from exotic amphibians gets out
  – treat wastewater, solid wastes – NO ESCAPES
  – maximize automation, minimize contact
• research, education: nothing out
• release: nothing out, in, or between
  – 1 species/assemblage per room
  – footbaths, dedicated footwear
  – gloves, nets, hoses, filters
  – pests
• collection flow
• degrees of separation
• maintain balance of native commensals
Above all, do no harm.
Where?

- 2002 Guidelines: “Ex situ programmes are often best situated close to or within the ecogeographic range of the target taxa and where possible within the range State”.
- Convention on Biological Diversity (CBD) guidelines:
  - a) adopt measures for the *ex situ* conservation of components of biological biodiversity, preferably in the country of origin of such components;
  - b) establish and maintain facilities for *ex situ* conservation of and research on plants, animals, and micro-organisms, preferably in the country of origin of genetic resources. …
  - (e) Cooperate in providing financial and other support for ex-situ conservation outlined in subparagraphs (a) to (d) above and in the establishment and maintenance of ex- situ conservation facilities in developing countries.’

- one should work with taxa where they are native (i.e., an existing facility should take care of the most CR in its backyard, and CR taxa without facilities in their front yard require capacity building).
Training Courses

• AZA Amphibian Biology & Management
  – April 2008 = 6th workshop since 2004
  – over 130 students
  – 12 Latin American, 1 Asian, 1 European, 1 Australian, 2 African
    • 3 Panama, Colombia, 3 Mexico, 3 Ecuador, Peru, Guatemala
    • $: ZCOG, Chicago, Cleveland, St. Louis, Zurich, AZA, Columbus, Zoos
      South Australia
Training Courses

• AArk Husbandry Workshops
  – Mexico May 2006 – 35 students
  – Ecuador* November 2006 - >20 students
  – Colombia February 2007 - >100 students
    • $: SeaWorld, Chicago, ZCOG, Chester, Zurich, CI
  – Venezuela November 2007 – 73 students
    • $: WAZA, SeaWorld
  – planning Peru, Mesoamerica, Brazil, China
Training Courses

• Europe
  – Jersey/DWCT Amphibian Biodiversity Conservation
    • Jersey June 2006: 18 students, 15 countries
    • India December 2007
  – German partners
    • Germany June 2007
    • Germany February 2008
  – EAZA
    • Jersey March 2008
      – 10 more Euro courses
    • Johannesburg April 2008
Training Courses

- **ARAZPA**
  - India 1998 - >30 students
    - Melbourne Zoo staff led 3-day workshop at Mysore Zoo in Chennai
  - Malaysia January 2008
    - 11 southeast Asian countries represented
  - Thailand June 2008
    - 5 Thai zoos represented