FOCUS ON CONSERVATION

Amphibian Pods

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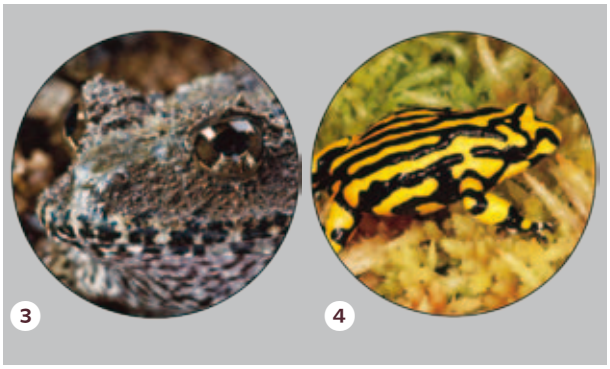

LEFT: RON HOLT RIGHT: MICHAEL MCFADDEN

Fig. 1 and 2: The "frogPOD" at the Atlanta Botanical Garden. Fig. 3: *Strabomantis bufoniformis*, a toad-like species in the family Eleutherodactylidae that is native to Panamá and Colombia, is being kept in the "pod" at Atlanta. Fig. 4: The "pod" at the Taronga Zoo houses critically endangered Southern Corroboree Frogs (*Pseudophryne corroboree*).

Amphibians are among the most imperiled groups of animals and plants. For every species of threatened bird or mammal, two or three amphibians are on the brink of extinction. The global conservation community has formulated a response to the amphibian extinction crisis in the Amphibian Conservation Action Plan (www.amphibianark.org/pdf/ACAP.pdf). An integral part of that response is the Amphibian Ark, in which species that would otherwise become extinct are maintained in captivity until the threats facing them can be mitigated and they can be secured in the wild. Without immediate captive management as a stopgap component of an integrated conservation effort, hundreds of amphibian species could become extinct.

The clever reuse of insulated cargo-shipping containers as amphibian rescue facilities was pioneered by Australia's Gerry Marantelli at the Amphibian Research Centre (see http://frogs.org.au/arc/container.php), a private facility that houses in these "amphibian pods" over three thousand threatened amphibians. Subsequently, other pods have popped up in Australia (Taronga Zoo, Tidnibilla Nature Reserve, Healesville and Currumbin Sanctuaries) as well as in Europe (Jersey and Chester Zoos), the U.S. (Phoenix Zoo, Atlanta Botanical Garden), Chile (Universidad de Concepción), and Panamá (El Valle Amphibian Conservation Center, Panama Amphibian Rescue Project).

Pods are ideal rescue facilities for amphibians. They are relatively inexpensive, often cheaper than new "traditional" construction. A 320-ft^2 pod, coincidentally about the perfect size to house an entire rescue population of an average-sized amphibian, costs ~$50,000 including purchase, refurbishment, outfitting (with shelves, tanks, etc.), shipment to point of use, installation, and a generator. Containers are available everywhere in the world, often as discounted "retired" units that are still fit for use. Pods are easily modified to meet particular specifications; every major port in the world seems to have a company that specializes in retrofitting units for other uses (offices, storage, housing, etc.). They are modular, easily placed adjacent to or on top of each other, and so can be added one at a time to increase capacity at a given facility, which is ideal when space is limited. They also are mobile and made to be easily transported, so they can be delivered "ready-to-go" to a point of use, or if need be, relocated from one site to another (try doing that with traditional construction!). All they need is a concrete pad and hookup to local water and electrical supplies. Finally, pods are easily modified to be an attractive exhibit by adding large viewing windows and graphics.

Pods in Australia are being used to rescue Corroboree Frogs (*Pseudophryne corroboree*, *P. pengilleyi*) and Spotted Treefrogs (*Litoria spenceri*). Pods in Jersey and Chester house Mountain Chickens (*Leptodactylus fallax*), Agile Frogs (*Rana dalmatina*), Morelet's Treefrogs (*Agalychnis moreletii*), and Green-eyed Frogs (*Lithobates vibicarius*). The Phoenix pod housed Chiricahua Leopard Frogs (*Lithobates chiricahuensis*) for over 10 years before moving them to the Native Species Conservation Center, and the Atlanta pod maintains several rescued Panamanian species. The Chilean pod houses Darwin's Frogs (*Rhinoderma darwinii*) and the pod in El Valle is being set up for Panamanian Golden Frogs (*Atelopus zeteki*). All of these species are threatened regionally or globally.

For more information about the global effort to rescue amphibians, see www.AmphibianArk.org.