

SPECIES SURVIVAL PLANS

STRATEGIES FOR WILDLIFE CONSERVATION



AMERICAN ZOO AND AQUARIUM ASSOCIATION

PUERTO RICAN CRESTED TOAD



METROPOLITAN TORONTO ZOO

**THE PUERTO RICAN
CRESTED TOAD
IS THE ONLY
TOAD NATIVE TO
PUERTO RICO.**



For more than three decades, the Puerto Rican crested toad was believed to be extinct. As a result, great excitement surrounded the discovery of a few of these four-inch amphibians in 1966 and 1967. However, no additional toads could be found, despite numerous searches and reward offers. Then, in the early 1980s, a few reproducing toads were collected and the offspring distributed among several zoos in the U.S. and Canada. Since that time, three small wild populations have been discovered.

Two factors contributed to the crested toad's decline: exotic marine toads and humans. Since its introduction to control sugarcane pests in the early 1900s, the large South American marine toad has spread throughout Puerto Rico, competing with the crested toad for food, breeding ponds, and resting sites sheltered from the hot sun. Marine toads also eat the much smaller crested toads.

The threat from human encroachment on the toad's habitat also persists. The largest known crested toad breeding site is a dirt parking lot which floods during rain and is under constant threat of development. And, in 1986, a hurricane completely eliminated one of the three remaining wild populations.

One of the most difficult and frustrating aspects of captive breeding programs is persuading animals to breed under artificial conditions. This can be especially difficult with a species whose reproduction is triggered by specific climatic conditions. A continuing challenge for the Crested Toad SSP is to simulate Puerto Rico's long dry spells followed by torrential spring rains. Some success has been realized, but research into the precise temperature, humidity, and length of time required for a successful reproductive cycle continues. Even after a successful wet/dry cycle, ovulation must often be artificially induced with hormone injections.

To enhance the crested toad's chances for survival, the Puerto Rican people must value the animal and participate in its recovery. The Puerto Rican Department of Natural Resources and Guanica State Forest Manager, Miguel Canal, have championed this fight from the beginning, and the toad's existence is largely due to their efforts. All crested toads collectively managed by the SSP are owned by the Department of Natural Resources, not by individual zoos.

Cooperation with the Puerto Rican government has led to extensive public education about the toad. Educational posters were distributed as part of the public relations campaign to inform all Puerto Ricans

about the importance and uniqueness of this species which occurs nowhere else in the world. Today, children of the Guanica region, where the toads live, are well aware of this natural wonder and show a great deal of appreciation for it.

Once captive-bred toads are released, they are monitored in order to evaluate their survival. Tracking the toads is essential when they leave the breeding ponds and return to deep crevices in rocky limestone outcroppings. Miniature radio transmitters, about the size of a pencil eraser, are attached to these small, slippery amphibians by specially designed backpacks. Equipped with their tiny backpacks, the reintroduced toads are able to behave normally and supply biologists with valuable information on their activities and movements.

In late 1991, and again in 1993, a group of toads hatched earlier in the year was returned to Puerto Rico to supplement the endangered wild population. The SSP's goal is to reestablish the toad in its natural habitat by the year 2000. This will require the creation of a number of self-sustaining populations. Once wild populations are thriving, genetic concerns can be reduced by the simple exchange of individuals between populations. If all goes according to plan, the Puerto Rican crested toad may be the first SSP species for which captive breeding is no longer necessary.

In 1993, the Puerto Rican government built an artificial pond designed to act as a new breeding site. It is hoped that additional ponds can be built in the near future.

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SMALL RADIO
BACKPACKS HELP
SCIENTISTS
TRACK TOADS IN
THE WILD.

