



U.S. Fish & Wildlife Service

Wyoming Toads and Cattle: at Home on the Range

“They let me turn the first toad loose. They honored me that way.” That was what Charlie Swanson said about releasing endangered Wyoming toads on Buford Foundation land near his Albany County ranch.

Such an event once would have seemed impossible. Biologists feared that the Wyoming toad was extinct until 1987 when a fisherman discovered a population at Mortenson Lake on Swanson’s land. The discovery created excitement about a chance to save the species and its habitat, and it led Swanson to sell the site to The Nature Conservancy. The Fish and Wildlife Service later bought it to create Mortenson Lake National Wildlife Refuge.

But this site alone cannot ensure the species’ future. The Wyoming Toad



Wyoming toad (*Bufo baxteri*). Photo by Jason Palmer, USFWS



Rancher Charlie Swanson and Wyoming toad recovery team member Deedee Runner at the Buford Foundation Safe Harbor site. Photo by Terry Smith, USFWS

Recovery Plan calls for actions such as breeding toads in captivity and re-establishing them in areas within their historical range in southern Wyoming’s Laramie River Basin.

The Buford Foundation, which runs a privately funded outdoor camp for urban children, owns land that contains habitat suitable for the Wyoming toad. Members of the species recovery team approached the Foundation’s president, Dave Mangelsen, about the possibility of releasing toads onto its property. The Foundation volunteered to join the recovery effort under the umbrella of a Safe Harbor Agreement between the Laramie Rivers Conservation District and the Fish and Wildlife Service.

As an enrollee in the agreement, the Buford Foundation allows the reintroduction of Wyoming toads on its land and carries out wetlands restoration activities, confident that its land uses such as livestock grazing and crop irrigation are consistent with species protections called for under the Endangered Species Act. The agreement also protects adjacent landowners against liability for the

incidental take of any toads that move onto their property during traditional agricultural activities. This protection provides peace of mind for owners of three large ranches with wetlands that cross property lines.

So far, recovery team members have reintroduced more than 6,000 captive-bred tadpoles, toadlets, and toads into wetlands on the Buford Foundation property.

“Without the support of Dave Mangelsen, we never would have been able to get the toads out there,” said Brian Kelly, field supervisor of the Service’s office in Cheyenne.

The help of ranchers like Swanson is also important. As a member of the Wyoming Toad Recovery Team, he provides recommendations to the Service for managing the toads at the refuge and at the Buford property.

“Charlie Swanson pretty much woke up people that grazing was a necessary part of the equation—instrumental in the recovery of the toad,” says Dallas Talbott, a rancher who grazes cattle on



Bradley P. Rogers and Andrea Gray of the Fish and Wildlife Service's Cheyenne Office and Art Anderson, manager of Buford Foundation, restore habitat for endangered Wyoming toads. USFWS photo

part of the Buford property. Wyoming toads use short grass and warm, shallow water—conditions that rotational grazing can create and maintain.

Swanson's management activities—lowering the levels of lakes in June to irrigate hay meadows—warm the water and extend the shoreline, creating breeding habitat just when the toads lay their eggs. Cattle grazing also controls plant growth. With grass reduced to three inches tall, the ground is warm and inviting to the toads.

Much remains unknown about Wyoming toads. They have a high mortality rate, and as Art Anderson, manager for the Buford land, points out, "Five percent is a good figure for survival to adulthood." The toads are riparian amphibians and stay close to aquatic areas. Like toads and frogs around the world, the Wyoming toad is susceptible to chytrid fungus infections. Future research includes using telemetry devices to find out where the toads go, what habitat they use, and what they do during winter months.

Through the Wetland Reserve Program, the Buford Foundation has a permanent conservation easement for 300 acres of wetlands, including the area where the toads were released. Biologist Paul Obert of the Natural Resources

Conservation Service in Wyoming notes that the program can provide compatible use authorization to optimize wetland functions and values, including wildlife and migratory birds. "Partners are working together for this most endangered amphibian," he said.

Biologist Mike Lessard of the Service's Partners for Fish and Wildlife Program credits the many partners for the success to date. "On the Refuge, NRCS plugged the ditches and reconstructed water control structures, and the toads were thriving. We developed nine more toad-brood rearing wetlands. Grazing cattle and diverting water to simulate an oxbow wetland helped to duplicate river action."

The Saratoga National Fish Hatchery and the Sybille Wyoming Toad Captive Rearing Facility produced the Wyoming

Facilities that maintain captive populations of Wyoming toads include:

- Zoo Montana, Billings, MT
- Sybille Wyoming Toad Facility, Laramie, WY
- Saratoga National Fish Hatchery, Saratoga, WY
- Philadelphia Zoo, Philadelphia, PA
- Toledo Zoo, Toledo, OH
- Central Park Zoo, New York, NY
- Cheyenne Mountain Zoo, Colorado Springs, CO
- Detroit Zoo, Detroit, MI
- Houston Zoo, Houston, TX
- Memphis Zoo, Memphis, TN
- Mississippi River Museum, Dubuque, IA
- Omaha's Henry Doorly Zoo, Omaha, NE
- Saint Louis Zoo, Saint Louis, MO
- Moody Gardens, Galveston, TX
- Museum of Science, Boston, MA



Buford Foundation property, Albany County, Wyoming. USFWS photo

toad tadpoles, toadlets, and adults released at Buford. The Wyoming Fish and Game Department has supported the captive-breeding program for many years and operated the Sybille facility until 2004, when it transferred the facility to the Service.

Tony Hoch, Laramie Rivers Conservation District manager, sums it up: "We are optimistic that this precedent will pave the way for future collaborations related to some endangered species." This conservation work is truly a partnership initiative.

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