

Wyoming Toad - *Anaxyrus baxteri*

Abundance: Extremely rare

Status: NSS1 (Aa)

NatureServe: G1 S1

Population Status: Imperiled due to greatly restricted numbers and distribution, extinction is possible. This species is federally listed as endangered.

Limiting Factor: Habitat: habitat modification, loss, and alterations in land use have resulted in severely restricted range.

Comment: The genus of the species was changed from *Bufo*. Formerly *Bufo baxteri*.

Introduction

Wyoming Toads are currently restricted to Albany County, Wyoming. Historically, this species was observed in the floodplains of the Big and Little Laramie Rivers (Odum and Corn 2005). In the mid 1970's, Wyoming Toad populations experienced drastic declines. Following this decline, the species was reported as possibly extinct. After an isolated population of Wyoming Toad was discovered, this species was listed as federally endangered in 1984 (49 F.R. 1992, January

17, 1984). Today, this species is restricted in the wild to less than 5 sites in the Upper Laramie and Medicine Bow watersheds, including 2 Safe Harbor Agreement sites. Reproduction in the wild has only been documented at 2 sites since the species was listed. A captive breeding program has been implemented at 9 institutions. Wild adults appear from hibernation when daytime temperatures reach approximately 70 degrees Fahrenheit (Baxter and Stone 1985). Breeding behavior typically occurs a week following emergence. Eggs are laid in shallow permanent waters. Egg masses contain 1,000 to 6,000 ova (Odum and Corn 2005). Wyoming Toad larvae typically transform by early August. Wyoming Toads feed upon beetles and other small invertebrates. Males are thought to reach sexual maturity at two years of age, while females are thought to reach maturity by three years.

Habitat

The Wyoming Toad lives in floodplains, ponds, and small seepage lakes in the mixed grass prairies (Baxter and Stone 1985, Geraud and Keinath 2004). Adults tend to restrict their habitat use to within 10m of the water (Odum and Corn 2005). Hibernating habitat for the Wyoming Toad is not well understood (Geraud and Keinath 2004).

Problems

h Wyoming Toads face a number of management issues. These include concerns for genetic health, disease, and habitat modification/destruction. Due to precipitous declines, retention of genetic diversity is an important issue. Current captive breeding programs are tasked to maximize genetic variation. Chytrid fungus is present in known populations of Wyoming Toad. This disease has been attributed to anuran decline. Habitat modification and anthropogenic factors such as irrigation, chemical application, and increased levels of human subsidized predators are factors that also may affect Wyoming Toad populations. Additionally recovery efforts are hampered by low survivalship and lack of ideal recovery sites.

Conservation Actions

- h Follow conservation actions as outlined in USFWS Wyoming Toad Recovery Plan.
- h Perform research on how to better manage wild and captive populations.
- h Expand and improve reintroduction success (i.e. adult survival, reproduction) at Safe Harbor sites

Monitoring/Research

Continue annual monitoring of known and suspected populations of Wyoming Toad. Perform research on vitamin deficiency in captive populations of Wyoming Toad. Continue monitoring prevalence of Chytrid fungus at known Wyoming Toad populations. Conduct research on hibernacula and survivalship of adult toads.

Recent Developments

Wyoming Natural Diversity Database's (WYNDD's) development of protocol to standardize Wyoming Toad surveys. Standardized surveys were performed at all known and suspected Wyoming Toad populations after 2008. Began revision of Wyoming Toad Recovery Plan. Wyoming Toad Tadpoles were released at Safe Harbor Agreements sites. Water temperature monitoring was initiated at known Wyoming Toad survey sites.

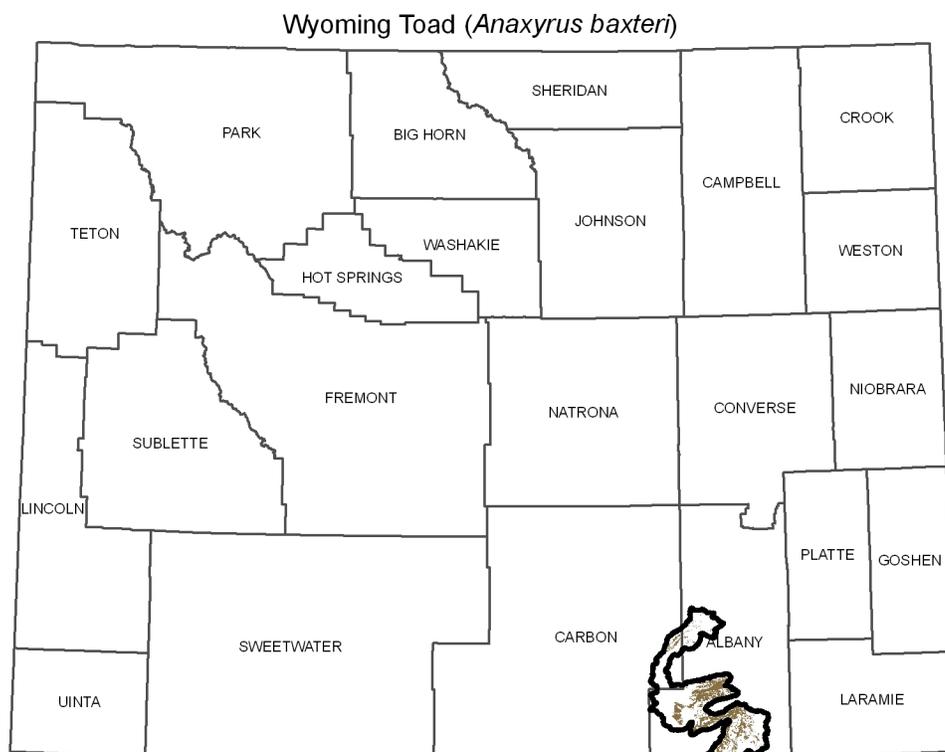
References

Baxter, G.T. and M.D. Stone. 1985. Amphibians and Reptiles of Wyoming. Second Edition. Wyoming Game and Fish Department, Cheyenne. 137pp.

Odum R. A. and P. S. Corn. 2005. *Bufo baxteri* Porter, 1968 Wyoming Toad. Pages 390-392 in M.J. Lannoo (ed.), Amphibian Declines: The Conservation Status of United States Species. University of California Press, Berkeley, CA.

Geraud, M., and D. A. Keinath. 2004. Species Assessment for Wyoming Toad (*Bufo Baxteri*) in Wyoming. Report prepared for the Bureau of Land Management Wyoming State Office by the Wyoming Natural Diversity Database, University of Wyoming, Laramie, WY.

U.S. Fish and Wildlife Service. 2002. Wyoming Toad Recovery Plan, Colorado. Region 6, Lakewood, Colorado. 56 pp.



SOURCE: Digital maps of ranges and predicted distributions for Wyoming Species of Greatest Conservation Need: April 2010. Wyoming Natural Diversity Database. University of Wyoming, Laramie, Wyoming. Note that brown indicates the predicted distribution of the species; heavy black lines indicate outermost boundaries of possible occurrence.