

Herpetofauna of Lake Meredith National Recreation Area, Alibates Flint Quarries National Monument, and Vicinity, Texas

Source: Michael Patrikeev, *The Nature Conservancy of Texas*

PROJECT SUMMARY



COURTESY OF COLORADO DIVISION OF WILDLIFE

Ornate box turtle

Introduction and Background

The north-central Texas Panhandle lacks recent herpetological assessment, and Lake Meredith National Recreation Area (LAMR) and Alibates Flint Quarries National Monument (ALFL) have never been thoroughly surveyed for amphibians and reptiles. The only detailed herpetological study in the region was conducted in 1950 at a ranch in Hutchinson County, about 27 km NNW from the northeastern border of LAMR. Also, a brief study was conducted in 1974 at a ranch in Oldham County, about 45 km W of the southwestern border of LAMR. The only document containing herpetofauna information for LAMR is a list of vertebrates compiled in 1989; the list is not annotated or substantiated by specimens or photographs, and it is not clear whether the author used personal observations and/or published distributional maps. My study of herpetofauna in LAMR and ALFL and vicinity was conducted in 2002-03 during a comprehensive inventory of vertebrate animals undertaken in a cooperative project between the National Park Service and The Nature Conservancy.

Study Area and Methods



NPS PHOTO

Woodhouse's toad

Inventory methods consisted of six types of surveys/observations: visual encounters, coverboard stations, night road surveys, auditory amphibian surveys, turtle surveys using hoop traps, and examination of four university collections. Visual encounters involved systematic and opportunistic searches such as turning over rocks, logs, and other debris, or looking into rock crevices and cracks in structures. Coverboard stations were set up in randomly selected sites in the study area in March-April 2002. Coverboards were checked between 20 May-9 August 2002 and 18 April-10 June 2003, but due to the dry and hot conditions in both summers they proved ineffective (and were checked on an ad hoc basis). Night road surveys were conducted on rainy or warm and humid nights by slowly driving and looking for reptiles and amphibians crossing roadways. All paved park roads and most accessible, unpaved roads were surveyed. A total of 13 night searches were conducted in 2002 and 11 in 2003. Auditory amphibian surveys for frogs and toads were conducted in freshwater habitats in March-June 2002 and 2003 (usually after a period of warm weather in spring, and after rains later in the season). Turtle surveys were conducted over two periods in 2002 (5-9 September at Sanford Marsh, and 16-17 September in the Canadian River) using large hoop traps. Additional detail on these methods can be found in the full project report.

Results and Discussion

The project documented nine species of amphibians and 28 species of reptiles, and one amphibian and seven reptile spe-



cies are known from museum specimens. Three of the species documented were new for Moore County, and the distributions for two species were adjusted based on this work. Also, 13 species (three amphibians and ten reptiles) were recorded on adjacent lands in the past, and some may occur in the parks as well. See the full report for a complete list and locations of the species documented.

Night road searches and visits to potential breeding sites were the most effective survey techniques for amphibians. The most conspicuous, widespread, and common amphibian in LAMR and ALFL was the Woodhouse's toad (*Bufo woodhousii woodhousii*). Other common and/or widespread species included the Couch's spadefoot (*Scaphiopus couchii*), Western

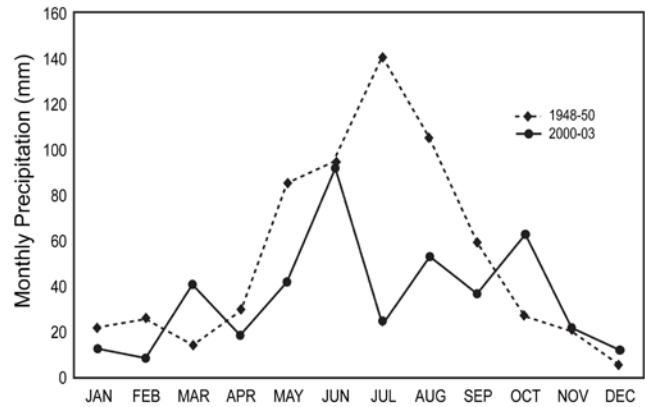


Figure 1. Average monthly precipitation in the central Texas Panhandle in 1948-50 and 2000-03.

This project detected most of the amphibian and reptile species expected to occur in the north-central Texas Panhandle. The absence of several species detected during previous studies in the area might be explained by drought conditions in 2000-03 (Figure 1) or inadequate sampling efforts, although it is also possible that some of the species are locally extirpated. The methods employed in the study were likely insufficient to detect all expected species; drift fences and funnel traps are recommended for any future herpetological studies in the area.

Contacts

Michael Patrikeev, The Nature Conservancy of Texas, Amarillo, TX



PHOTO: ROBERT SHANTZ

Texas horned lizard

green toad (*Bufo debilis insidiator*), and red-spotted toad (*Bufo punctatus*). Turtles were caught in turtle traps, observed basking on rocks, etc., and encountered while driving and walking. The most frequently encountered turtle in both parks was the ornate box turtle (*Terrapene ornata ornata*). Most lizard species were found on cross-country hikes and while driving, and others were found under rocks and coverboards. The Texas horned lizard (*Phrynosoma cornutum*), listed as a species of concern in the state, was common and wide-spread in the study area. Other common and/or widespread species included the prairie lizard (*Sceloporus consobrinus*) and the prairie racerunner (*Cnemidophorus sexlineatus viridis*). The most efficient methods of detecting snakes were turning over rocks and debris, and night road searches. The most common and/or widespread snakes were the Western coachwhip (*Masticophis flagellum testaceus*) and the Western diamondback rattlesnake (*Crotalus atrox*).



Western green toad

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