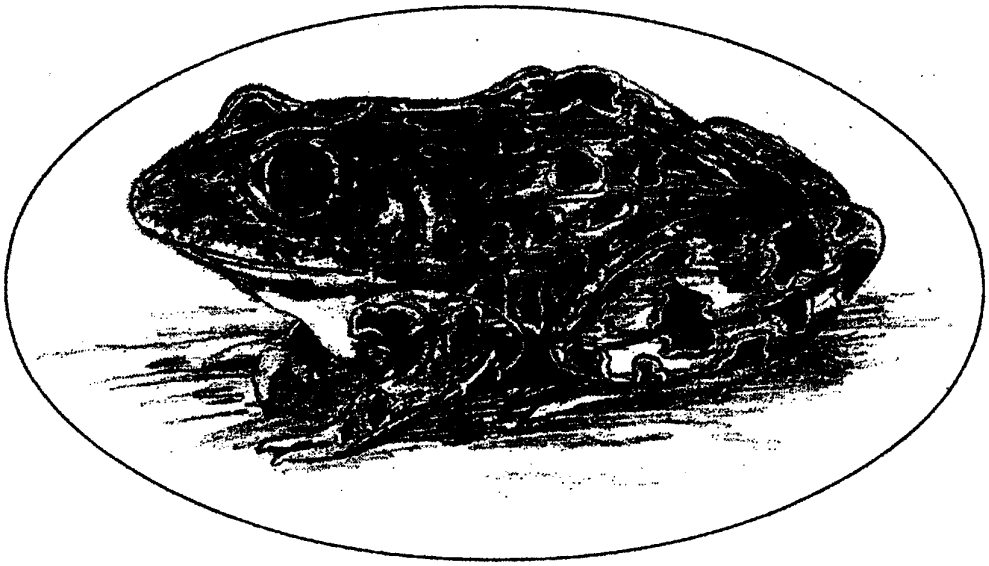
TECHNICAL BULLETIN NO. 98-6 IDAHO BUREAU OF LAND MANAGEMENT June 1998



A SURVEY FOR NORTHERN LEOPARD FROGS (*RANA PIPIENS*) IN THE SNAKE RIVER RESOURCE AREA: 1997

by
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ACKNOWLEDGEMENTS

A number of people provided valuable assistance during this study, and are deserving of recognition and thanks. Dan Martens, John Martens and Amy Makela assisted throughout the season, volunteering many long hours in the field. Thanks also to Mike Johnson, Manager, Minidoka National Wildlife Refuge, for his enthusiastic support and field assistance. Dr. Charles Peterson and David Ross, Idaho State University Biology Department, provided historical records from the Intermountain Herpetological Database. Several individuals from BLM's Burley Field Office provided helpful information or field assistance at various times. These included Tom Dyer, Area Manager; John Augsburger, Wildlife Biologist; Jim Tharp, Ecologist; Karl Simonson, Realty Specialist; Blaine Newman, Outdoor Recreation Planner; and Carol Stroud, Range Technician. James Kumm, Wildlife Biologist, Malad Resource Area, provided a canoe and assisted during surveys of Daniels and Hawkins Reservoirs. Dan Kotansky, Hydrologist, Medicine Lodge Resource Area, loaned an electrical conductivity meter and provided helpful advice on interpretation of results. Mike McDonald, Wildlife Habitat Biologist, Idaho Department of Fish and Game, provided a pH meter. Chris Ketchum, U.S. Bureau of Reclamation, provided helpful suggestions for potential survey sites within BOR administered lands in Minidoka County. Jim Bright, Milner High Lift Irrigation District, graciously authorized surveys of wetlands on the District's private lands near Murtaugh Lake. Orvil Murphy, Burley, Idaho; Phil Bradfield, Minidoka National Wildlife Refuge; Max Vaughn, Rupert, Idaho, and Dennis Thompson, Heyburn, Idaho, provided helpful historical perspectives.

INTRODUCTION

In recent years, concern has grown over the status and trend of the northern leopard frog (*Rana pipiens*) in the United States and Canada. Populations in eastern North America apparently began declining in the 1960's, reaching Manitoba and Alberta, Canada in the mid- and late 1970's respectively (W. Roberts, Univ. of Alberta Museum of Zoology *in* Stebbins and Cohen 1995).

In the Pacific Northwest, declines or disappearances of leopard frogs have been noted in several states. In Washington, the northern leopard frog was historically well-represented in several areas in the eastern portion of the state; currently it is among the most rare of the state's amphibians (McAllister 1997). Anecdotal information for Oregon suggests that the species has not been observed in several historical sites in over twenty years (Hayes 1997). In western Montana, the species historically was common in intermountain valleys, but has now nearly disappeared; a decline in eastern and central Montana is suspected, but the status is poorly understood (Reichel et al. 1997).

In Idaho, a statewide survey of natural resource personnel, academicians and others indicated at least anecdotal evidence for declines in northern leopard frogs (Groves and Peterson 1992). Peterson (1997) reported that the distribution and relative abundance of northern leopard frogs appears to have decreased considerably in southern Idaho, as well as in the Greater Yellowstone Ecosystem. Presently, the species is designated as Sensitive by the U.S. Bureau of Land Management, and as a Priority Species of Special Concern by the Idaho Dept. of Fish and Game. While interest in amphibian ecology, distribution and trends in Idaho has increased dramatically in recent years, survey efforts have focused largely on the Columbia spotted frog (*Rana luteiventris*) (e.g. Munger et al. 1994; Munger et al. 1996; Munger et al. 1997). In southcentral Idaho, historical accounts (Appendix A, Table 1) note the presence of northern leopard frogs in several localities along the Snake River from Blue Lakes Springs near Twin Falls upstream to American Falls, and possibly at Lake Channel; in the Twin Falls city limits; at Deep Creek, east of Rogerson; and along Cassia Creek and the Raft River. During a biological survey of Salmon Falls Canyon in western Twin Falls County, Trost (1975) reported that the species was "observed all along the creek from the dam to Balanced Rock".

In 1994-95, an amphibian survey in portions of the Jarbidge and Snake River Resource Areas, including upper Salmon Falls Creek, yielded no leopard frogs (McDonald 1996). In 1995, the species was noted in several localities near the eastern half of Lake Walcott, by S. Bouffard, U.S. Fish and Wildlife Service (Table 1). The only other recent observation of leopard frogs in the Snake River Resource Area, prior to this study, was noted by J. Tharp, Ecologist, along the Raft River narrows in southern Cassia County in September 1992.

In the Malad Resource Area, leopard frogs were documented at St. John's Reservoir by J. Hawk in 1992 and at Hawkins Reservoir by J. Kumm and C. Trost in 1994 (Table 1).

The recent rarity of northern leopard frog sightings in the Snake River Resource Area is notable.

Between 1991 and 1997, Burley Field Office resource staff and contracted field personnel, requested to document incidental amphibian sightings during the course of other investigations, observed no leopard frogs despite involvement in over 130 miles of riparian inventories and field verifications of hundreds of springs, wet meadows and reservoirs, exclusive of the Snake River. Some of these sites, such as those characterized by high gradient, fast-flowing streams or ephemerally flooded shallow livestock reservoirs were inherently unsuitable for leopard frogs, but several substantial riparian systems, including Salmon Falls Creek, Cassia Creek, and the Raft River provided habitat historically (Table 1). Additionally, no leopard frogs were observed along Shoshone Creek or Big Creek in southern Twin Falls County, despite the presence of potential habitat and despite being tributaries of the Salmon Falls Creek watershed.

In light of the above, and considering the data gaps and uncertainty in our understanding of the northern leopard frog's current distribution and status in southcentral Idaho, it was prudent to begin focused surveys in 1997 to document localities of existing populations. With a better understanding of the species' distribution, planning for long term monitoring and/or conservation actions can be addressed.

STUDY AREA

The majority of the study area encompassed public (BLM), U.S. Bureau of Reclamation (BOR), U.S. Forest Service (USFS), Minidoka National Wildlife Refuge (USFWS), and selected private lands within the perimeter of the U.S. Bureau of Land Management's Snake River Resource Area in southcentral Idaho (Figure 1). Visits were also made to Wilson Reservoir, on the Shoshone Resource Area, and at Daniels and Hawkins Reservoirs within the Malad Resource Area. Since a primary objective of the study was to refine our knowledge of the current distribution of leopard frogs in southcentral Idaho, inclusion of sites owned and administered by a variety of entities was necessary in order to sample as broad a spectrum of historic and potential habitats as possible.

Idaho counties represented in the survey included portions of Bannock, Blaine, Cassia, Jerome, Minidoka, Oneida, Power, and Twin Falls. While surveys focused on the northern leopard frog, incidental observations of other amphibian and reptile species were also documented. Specific survey sites were subjectively selected primarily on the basis of the historic presence or probable potential for leopard frogs, convenience/accessibility, and on the need for baseline surveys.

Elevations of survey sites ranged from 4015 ft (1224 m)to an extreme of 7200 ft (2195 m), however the majority of effort was expended at the lower elevations at various reservoirs, wetlands and riparian systems associated with the Snake River Plain.

Figure 1. Study area location. Snake River Resource Area 1997 northern leopard frog survey.