Northern Leopard Frog - Lithobates pipiens

Abundance: Abundant, but declining

Status: NSS4 (Bc) NatureServe: G5 S3

Population Status: Once widely distributed, but rangewide declines have been documented. Some populations may be recovering. Extirpation is not eminent.

Limiting Factor: Habitat: declines in habitat quality have resulted in increased mortality. Similar or increased levels of chemical runoff (pesticides, herbicides, and household chemicals) likely to continue. However, no one factor can be attributed to species decline.

Comment: Changed from NSSU to NSS4(Bc) due to what we have learned about the species over the past 6 years. Formerly Rana pipiens.

Introduction

The Northern Leopard Frog is historically one of the most common and widespread anurans in the United States. However, populations are known to be declining throughout its range. Northern Leopard Frogs may be found throughout Wyoming, but have experienced documented declines in the Greater Yellowstone Ecosystem and Laramie plains. Northern Leopard Frogs become active after water temperatures exceed 50 degrees Fahrenheit. The breeding season can extend from mid-March through July. Females typically deposit 600-7,500 eggs in a tight oval mass (Rorabaugh 2005). Depending on temperature, larval metamorphosis often occurs 3-6 months following egg deposition. In higher elevations, tadpoles may not metamorphose before winter. In Wyoming, Northern Leopard Frogs are not believed to overwinter as tadpoles (Baxter and Stone 1985). Northern Leopard Frogs actively forage among sedges, cattails, and tall grasses. Primary food items are invertebrates (beetles, flies, ants, worms, snails, etc.); however adult frogs will sometimes consume voles, small birds, snakes, and other amphibians (Baxter and Stone 1985). Resting near pond and lake margins, this species will quickly leap into the water if alarmed. Northern Leopard Frogs are known to winter in ponds, buried in mud. In many cases, they use a shallow pond for breeding and deep pools to hibernate.

Habitat

The Northern Leopard Frog can be found in or near permanent water in the plains, foothills, and montane zones (Smith and Keinath 2007). They can range to over 8,500 feet in elevation. Their preferred habitats are swampy cattail marshes on the plains and beaver ponds in the foothills and montane zones.

Problems

- Habitat changes and other factors may be adversely affecting this species, but lack of data precludes identification of specific problems and development of management recommendations.
- Population status, distribution, habitat data, and disease status are lacking for this species.
- Alteration of aquatic habitats needed for breeding may adversely affect populations.

Conservation Actions

- A systematic study of this species should be conducted with respect to distribution, abundance, habitat associations, and disease status within Wyoming.
- Continue efforts to educate landowners and the public about the importance of amphibians.
- Develop management recommendations based on survey data.

Monitoring/Research

Conduct baseline surveys and chytrid sampling to gain better understanding of species distribution and disease status within the state. Monitoring should be conducted on known populations to ensure species viability.

Recent Developments

Baseline surveys have been conducted in southwest, southeast, and northern Wyoming to better understand herpetofaunal assemblages and distribution (Snoberger and Walker 2012, 2013, 2014). Many new populations (>35) were documented during these surveys. Northern Leopard Frogs have been tested for chytrid fungus across the state and several of these samples have tested positive for the fungus across the state. Chytrid-caused deaths have been documented in southeastern Wyoming (Snoberger and Walker 2013). Northern Leopard Frog monitoring has been conducted in the Powder River Watershed in conjunction with Coal Bed Methane discharge. Baseline surveys have been conducted for this species in Bighorn National Forest (Estes-Zump et al. 2012). Amphibians have received increased attention within Wyoming. Incidental observations are encouraged to be reported to the herpetology program.

References

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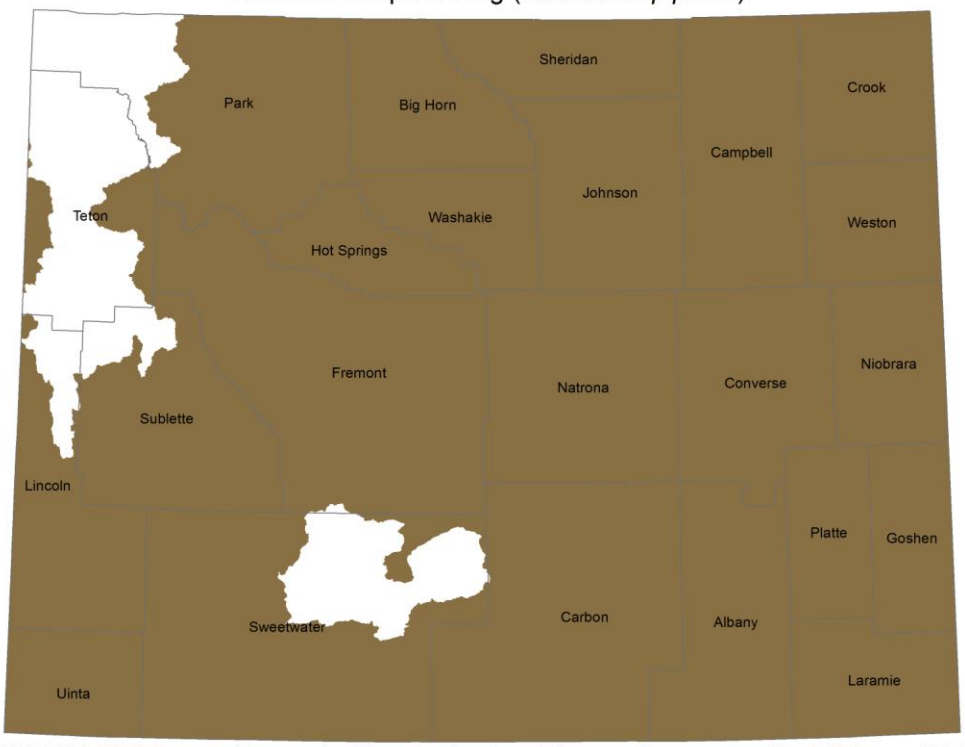
Northern Leopard Frog (*Lithobates pipiens*)



SOURCE: Digital maps of ranges for Wyoming Species of Greatest Conservation Need: February 2016. Wyoming Game and Fish Department. Note that brown indicates the current known range of the species.