

**Alberta Conservation Association
2009/10 Project Summary Report**

Project Name: *Alberta Northern Leopard Frog Recovery Program*

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Partnerships

Alberta Sustainable Resource Development

Calgary Zoo

Government of Canada Habitat Stewardship Program for Species at Risk

Parks Canada Species at Risk Recovery Action and Education Fund

TD Friends of the Environment Foundation

Key Findings

- Facilitated the hydro-seeding of native grass on approximately 4,000 square metres of disturbed land, and the removal of abandoned vehicles adjacent to frog ponds at the Taber stewardship site.
- Visited 41 homes within 2 km of the Battle River to educate landowners about northern leopard frogs (NLF) and determine if any NLF observations had been made in the area.
- On August 12, 2009, observed an adult NLF near the Spring Creek reintroduction site in Waterton Lakes National Park that was suspected to be an individual from founding stock released at the nearby Buffalo Creek reintroduction site in 2007.

Introduction

The northern leopard frog (NLF) (*Lithobates pipiens*) has suffered dramatic population declines in many parts of its range in Alberta. Although little studied, the decline in Alberta does not appear to be part of a natural cycle. The species' reduced area of occupancy and fragmented populations led to its listing as *Threatened* under Alberta's *Wildlife Act* in 1996. The status of NLF was re-evaluated in 2003, and confirmed to be *Threatened*.

Alberta Conservation Association (ACA) is a member of the Alberta Northern Leopard Frog Recovery Team (ANLFRT) and is involved in the delivery of several strategies and actions outlined in the species' Recovery Plan (ANLFRT 2005). Our work is conducted with the support

of this team, our funding partners and many landowners throughout east-central and southern Alberta. Alberta Conservation Association plays a key role in the implementation of NLF stewardship projects, the identification of NLF source and reintroduction sites, disease monitoring, population inventories and habitat assessments.

Methods

We conducted NLF surveys at reintroduction sites initiated in 2007 and 2008, as well as habitat assessments at the Taber stewardship site. We also canvassed landowners living within 2 km of the Battle River, just downstream from the Wainwright Military Base, to determine if any NLF observations had been made in the area. For all NLF surveys, we followed survey guidelines described in Kendell (2002) and we disseminated NLF outreach materials whenever possible. Northern leopard frog “Wanted” posters, soliciting sighting reports from the public, were posted strategically in some survey areas. We reported all sightings for input into the Alberta Government’s Fisheries and Wildlife Management Information System (FWMIS) database.

We collected tissue samples from amphibians captured at Rock Lake (near Brooks) to test for chytrid fungus (*Batrachochytrium dendrobatidi*, Bd), and for NLF also tested for Ranavirus following techniques outlined in Whiteside et al. (2007). All collected disease tissue samples were submitted to Alberta Sustainable Resource Development and then onto appropriate laboratories for molecular diagnostics.

We translocated NLF eggs from source sites to reintroduction sites in Waterton Lakes National Park, Wyndham-Carseland Provincial Park and Beauvais Provincial Park following methods outlined in the Northern Leopard Frog Reintroduction Strategy for Alberta (Kendell and Prescott 2007).

Results

We surveyed four NLF reintroduction sites between August 9 – 13, 2009: Michichi Reservoir, Grainger Reservoir, Snake Lake and Rock Lake. We did not observe mature NLF during these surveys. From Rock Lake, we collected eight tissue samples from young-of-the-year NLF that hatched from eggs earlier that spring, as well as a tissue sample from one boreal chorus frog (*Pseudacris maculata*).

Of the 40 homes visited along the Battle River, we were able to speak directly with 18 separate residents. At all homes, we left information about NLF so they could become more aware and familiar with the species, as well as contact information should they see NLF on or near their land in the future.

During stewardship assessments at the Taber stewardship site, we recorded several abandoned vehicles and car tires, major household appliances and furniture, and dozens of other forms of debris; the majority of which was found in the bodies of water used or suspected to be used by

NLF. Several areas were found to be degraded by unauthorized off-highway vehicle use. We worked with the Town of Taber and local contactors to remove vehicles from the coulees and hydro-seeded approximately 4,000 square metres of disturbed habitat adjacent to NLF ponds.

We spent 11 days between April 29 and May 14, 2009 conducting egg surveys, collections and translocations. We surveyed a total of 12 source ponds and we were able to ultimately collect and translocate four egg masses to both Waterton National Park and Wyndham-Carseland Provincial Park, and five egg masses to Beauvais Provincial Park.

Conclusions

Alberta Conservation Association is working cooperatively with a number of partners and stakeholders to ensure that NLF remains a part of Alberta's natural heritage. This work includes the co-ordination of reintroductions and stewardship activities that will help to alleviate concerns associated with current populations, such as vulnerability to disease, human disturbance and habitat changes. Through collaborative research, ACA is also contributing to an increased understanding of the distribution and relative size of NLF populations in Alberta, as well as disease issues associated with the recovery of the species.

Communications

- ACA Technical Report: Wilson, G.A., T.L. Fulton, K. Kendell, G. Scrimgeour, C.A. Paszkowski, and D.W. Coltman. 2009. Genetic assessment of potential source populations for the reintroduction of northern leopard frogs (*Rana pipiens*) to sites in Alberta, T-2006-000, produced by the Alberta Conservation Association, Edmonton, Alberta, Canada. 39 pp + App.
- Newsletter article: S. Stevens, K. Kendell, and D. Prescott. 2009. Participate in species at risk stewardship right in your own backyard! In: *Croaks and Trills* 13(2).
- Conference poster presentation - Strengthening Stewardship – Investing at Every Step, the 4th National Stewardship and Conservation Conference. Northern leopard frog stewardship in Alberta. MacEwan Conference and Event Centre, University of Calgary, Calgary, Alberta. July 8 – 11, 2009.
- Conference paper presentation – Canadian Amphibian and Reptile Conservation Network Annual General Meeting. Alberta's northern leopard frog recovery program and stewardship in Alberta, Canada. Saskatoon, Saskatchewan. September 25 – 28, 2009.
- Newspaper – *The Taber Times*. Seeding project completed near frog pond. December 2, 2009. Page B5.
- Newspaper – *Lethbridge Herald*. Leopard frog making leap from extinction: Magrath project helping to restore population. July 25, 2009. By Rie Swihart. Page A3.
- Newspaper – *Westwind Weekly News*. Leopard frogs love Magrath. July 30, 2009. By Carma Thomson. Page 4.

Literature Cited

Alberta Northern Leopard Frog Recovery Team. 2005. Alberta northern leopard frog recovery plan, 2005–2010. Alberta Sustainable Resource Development, Fish and Wildlife Division, Alberta Species at Risk Recovery Plan No. 7, Edmonton, Alberta. 26 pp.

Kendell, K. 2002. Survey protocol for the northern leopard frog. Alberta Sustainable Resource Development, Fish and Wildlife Division, Alberta Species at Risk Report No. 43, Edmonton, Alberta. 30 pp.

Kendell, K., and D. Prescott. 2007. Northern leopard frog reintroduction strategy for Alberta. Technical Report, T-2007-002, produced by Alberta Conservation Association, Edmonton, Alberta, Canada. 31 pp + App.

Whiteside, D.P., D. Prescott, and K. Kendell. 2007. Diagnostic testing for emerging amphibian diseases in Alberta. Calgary Zoo Animal Health Centre, Calgary, Alberta. 6 pp.