

Alberta Conservation Association 2016/17 Project Summary Report

Project Name: Alberta Volunteer Amphibian Monitoring Program

Wildlife Program Manager: Doug Manzer

Project Leader: Kris Kendell

Primary ACA staff on project: Kris Kendell

Partnerships

TD Friends of the Environment Foundation

Key Findings

- Through a partnership with TD Friends of the Environment Foundation, we were able to reprint the *Amphibian Identifier* and *Reptiles of Alberta* brochure.
- We delivered 9 oral presentations over the past year highlighting the conservation needs of amphibians and reptiles.
- We delivered a lecture to fourth-year students at Lethbridge College regarding species at risk management, with a focus on reptiles and amphibians.
- We are involved in the creation of an amphibian-based citizen-science program as part of Calgary's Rotary/Mattamy Greenway project, led by the Miistakis Institute, in partnership with Enbridge and the Calgary Parks Foundation.
- In total, 15 volunteers submitted 36 amphibian and 4 reptile observations to AVAMP, including the location of 1 snake hibernaculum (den).

Introduction

Throughout Alberta, citizen scientists have contributed to conservation through their volunteer activities. Through volunteering, individuals are provided with opportunities to improve their skill set, increase their knowledge of conservation issues, and network with wildlife professionals; at the same time, volunteers increase our capacity to deliver wildlife initiatives. Currently, our largest wildlife volunteer-based project is the Alberta Volunteer Amphibian Monitoring Program (AVAMP). Data collected by program volunteers increase our knowledge about the distribution of Alberta's amphibian and reptile species and, along with other data, assist in updating the general status of amphibians and reptiles in Alberta (Alberta Sustainable Resource Development 2010) and provide valuable information for land-use planning efforts.

We also chair the Alberta Amphibian and Reptile Specialist Group, where we discuss topics and issues related to conservation and research in Alberta, as well as provide a forum for collaboration and communication.

Methods

At sites of their own choice, we encourage AVAMP participants to listen for calling frogs and toads in the spring and to search for individual amphibians throughout the spring, summer and early fall. Volunteers can also report the locations of snake hibernacula and other reptile sightings, including dead-on-road occurrences. We promote AVAMP through our email newsletter and through social media to increase awareness of amphibians and reptiles, and help us maintain relationships with program volunteers and other interested parties. We deliver oral presentations to target audiences to motivate and engage potential participants and improve awareness about the amphibians and reptiles in their communities. Volunteers self-register and enter their own monitoring data online.

We reviewed, verified and compiled all volunteer amphibian observations and then forwarded them (along with any reptile observations) to the Government of Alberta for entry into its Fisheries and Wildlife Management Information System database.

Results

In 2016/17, 13 new members joined AVAMP. In all, 15 AVAMP participants submitted a total of 36 amphibian and 4 reptile observations, including 1 snake hibernaculum (den) location. Data submitted by volunteers represented 70% of the amphibian and 22% of the reptile species native to the province (Table 1).

Table 1. Records of amphibian and reptile species observed by Alberta Volunteer Amphibian Monitoring Program participants in 2016/17.

Species	Taxonomic name	Number of records
Boreal chorus frog	<i>Pseudacris maculata</i>	12
Boreal toad	<i>Anaxyrus boreas</i>	6
Bullsnake	<i>Pituophis catenifer</i>	0
Canadian toad	<i>Anaxyrus hemiophrys</i>	1
Columbia spotted frog	<i>Rana luteiventris</i>	1
Great plains toad	<i>Anaxyrus cognatus</i>	0
Long-toed salamander	<i>Ambystoma macrodactylum</i>	0
Mountain short-horned lizard	<i>Phrynosoma hernandesi</i>	0
Northern leopard frog	<i>Lithobates pipiens</i>	2
Plains garter snake	<i>Thamnophis radix</i>	3
Plains hog-nosed snake	<i>Heterodon nasicus</i>	0
Plains spadefoot	<i>Spea bombifrons</i>	0
Prairie rattlesnake	<i>Crotalus viridis</i>	0
Red-sided garter snake	<i>Thamnophis sirtalis</i>	1
Tiger salamander	<i>Ambystoma mavortium</i>	5
Wandering garter snake	<i>Thamnophis elegans</i>	0
Western painted turtle	<i>Chrysemys picta</i>	0
Wood frog	<i>Lithobates sylvaticus</i>	9
Yellow-bellied racer	<i>Coluber constrictor</i>	0
Total		40

Through a partnership with TD Friends of the Environment Foundation, we reprinted the *Amphibian Identifier*, a quick identification guide for Alberta's amphibians available to volunteers for use in the field. The partnership also allowed us to reprint *Reptiles of Alberta*, a brochure that gets people thinking about their attitudes toward reptiles and their habitat needs. The brochure also encourages the reporting of reptile observations through AVAMP.

We are also participating in the creation of a new amphibian-based citizen-science program as part of Calgary's Rotary/Mattamy Greenway project, led by the Miistakis Institute. We have shared expertise and information about amphibian ecology, citizen-science program implementation, data collection protocols and survey methodology.

Conclusions

Data from AVAMP partnerships and volunteers will provide a better understanding of the distribution and status of Alberta's amphibians and reptiles. These established partnerships and volunteer relationships are examples of how ACA can work with a network of enthusiastic volunteers to positively impact conservation. AVAMP connects people to nature and generates valuable data from these encounters that support the conservation and management of Alberta's amphibian and reptile species.

Communications

Oral presentations

- Alberta Amphibian and Reptile Specialist Group, *Alberta Snake Hibernaculum Inventory*, Kris Kendell, Red Deer, AB, March 22, 2017.
- Joint Meeting: Society for Northwestern Vertebrate Biology, California North Coast Chapter of The Wildlife Society, NW Partners in Amphibian and Reptile Conservation, *Wetland Stewardship for Amphibians in the Northwestern United States and Western Canada*. Symposium: Top Ten Amphibian Research & Conservation Priorities: USA and Canada. Arcata, CA, 28 February – 3 March, 2017.
- Alberta Fish & Game Association, 88th Annual Conference, *Careers in the Environmental Field: Perspectives of a Herpetologist*, Kris Kendell, Edmonton, AB, February 25, 2017.
- Fort Saskatchewan Christian School, Grade 8/9 Outdoor Ed/Biology, *Reptile Ecology*, Fort Saskatchewan, AB, Kris Kendell, January 23, 2017.
- World Snow Day: Featuring the Beaver Hills Bioblitz, Celebrating Winter and Wildlife, *AVAMP*, Strathcona Wilderness Centre, Kris Kendell, Ardrossan, AB, January 15, 2017.
- Lethbridge College. *Species at Risk Management Course: Amphibians and Reptiles*, Kris Kendell, Lethbridge, AB, October 18, 2016.
- Elk Island Provincial Park, *AVAMP*, Kris Kendell, May 22, 2016.
- Ardrossan Recreation and Agricultural Society, Farm/Rural Safety Fair, *AVAMP*, Kris Kendell, Ardrossan, AB, May 7, 2016.
- Alberta Amphibian and Reptile Conservancy, *Herpetofauna Ecology and Conservation*, Kris Kendell, Edmonton, AB, April 26, 2016.

Publications

- *Amphibian Identifier*, reprint
- *Reptiles of Alberta*, reprint

Literature Cited

Alberta Sustainable Resource Development. 2010. The general status of Alberta wild species 2010. Available online at <http://www.srd.gov.ab.ca/fishwildlife/speciesatrisk/statusofalbertawildspecies>

Photos



The Alberta Volunteer Amphibian Monitoring Program logo captures the essence of the volunteer program—signifying discovery and exploration of the natural world, particularly of amphibians and wetlands. Photo: Alberta Conservation Association

Amphibian Identifier



Alberta Volunteer Amphibian Monitoring Program



TD Friends of the
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Columbia Spotted Frog

Rana luteiventris

- Small irregular dark spots with light centers
- Underside of hind legs and lower belly becomes orange-red or pinkish with age
- Ridges of skin (dorsolateral folds) along sides of back
- Eyes positioned towards top of head and angled upwards
- Background colour: light to dark brown
- Body length: up to 10 cm
- Call: series of quick low-pitched click sounds



photo: Richard D. Sage

The *Amphibian Identifier* assists Alberta Volunteer Amphibian Monitoring Program participants with amphibian identification while in the field. Photo: Alberta Conservation Association



Many of Alberta's amphibian and reptile species are poorly understood with respect to their distributions, leading to challenges in managing and conserving these species. Pictured is a live wandering garter snake observed near Calgary. Photo: Kris Kendell