

Alberta Conservation Association
2018/19 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

Alberta Environment and Parks

Parks Canada

Key Findings

- We delivered six oral presentations over the past year highlighting the conservation needs of amphibians and reptiles. We also contributed an article on amphibian conservation to ACA *Conservation Magazine*.
- We are a member of the International Union for Conservation of Nature (IUCN) Species Survival Commission (SSC) Amphibian Specialist Group (ASG), Canada.
- In total, 35 volunteers submitted 83 amphibian and 24 reptile observations to AVAMP, including the location of two snake hibernacula (dens).

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. One of our largest wildlife volunteer-based project is the Alberta Volunteer Amphibian Monitoring Program (AVAMP). Data collected by volunteers increases our knowledge of the distribution of amphibian and reptile species and, along with other data, assists in updating the general status (Alberta Sustainable Resource Development 2010), and providing 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. In 2017, we became a member of International Union for Conservation of Nature (IUCN) Species Survival Commission (SSC) Amphibian Specialist Group (ASG), Canada.

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 offer volunteers a quick identification guide for Alberta's amphibians (*Amphibian Identifier*) for use in the field as well as a brochure (*Reptiles of Alberta*) that gets people thinking about their attitudes toward reptiles and their habitat needs. These brochures encourage the reporting of amphibian and reptile observations to the program. We have also developed an online identification key to help volunteers confirm the identity of any amphibians or reptiles observed.

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

Results

In 2018/19, 30 new members joined AVAMP. In all, 35 AVAMP participants submitted a total of 83 amphibian and 24 reptile observations, including two snake hibernaculum (den) locations. Data submitted by volunteers represented 90% of the amphibian and 56% 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 2018/19.

Species	Taxonomic name	Number of records
Boreal chorus frog	<i>Pseudacris maculata</i>	19
Boreal toad	<i>Anaxyrus boreas</i>	14
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>	1
Long-toed salamander	<i>Ambystoma macrodactylum</i>	2
Mountain short-horned lizard	<i>Phrynosoma hernandesi</i>	1
Northern leopard frog	<i>Lithobates pipiens</i>	17
Plains garter snake	<i>Thamnophis radix</i>	14
Plains hog-nosed snake	<i>Heterodon nasicus</i>	0
Plains spadefoot	<i>Spea bombifrons</i>	0
Prairie rattlesnake	<i>Crotalus viridis</i>	1
Red-sided garter snake	<i>Thamnophis sirtalis</i>	7
Tiger salamander	<i>Ambystoma mavortium</i>	5
Wandering garter snake	<i>Thamnophis elegans</i>	1
Western painted turtle	<i>Chrysemys picta</i>	0

Wood frog	<i>Lithobates sylvaticus</i>	23
Yellow-bellied racer	<i>Coluber constrictor</i>	0
Total		107

Through public presentations and interactions with volunteers, we have shared expertise and information about amphibian and reptile identification, ecology, mitigation translocation, stewardship, citizen science, 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

- Waskahegan Trail Association Annual General Meeting, Edmonton, AB April 6, 2018
- Bookmobile Build a Better World Program, Strathcona County Library, Ministik School, AB August 7, 2018
- City of St. Albert, Sturgeon River and Natural Areas, Environment, Infrastructure & Development Services, St. Albert, AB October 2, 2018
- Lethbridge Naturalists' Society, Lethbridge, AB October 24, 2018
- Canmore Adopt-A-Pond/RANA Citizen Science, Canmore AB December 5, 2018

Conference Paper/Poster

- Advancing Citizen Science in Alberta: Changing Perspectives, Breaking Barriers. Hosted by Alberta Environment and Parks, Environmental Monitoring and Science Division, in collaboration with the Miistakis Institute, Alberta Volunteer Amphibian Monitoring Program, Edmonton AB September 26-27, 2018.

Articles

- Kendell, K. 2018. Salamander Superheroes: Meet Alberta's other amphibian, the salamander. *In: Nature Alberta's NatureWILD Magazine*, NatureKids program. Summer 2018. Page 4.

Media

- *St. Albert Gazette*, Environment (amphibian reproductive behaviour): February 12, 2019
- Fort Saskatchewan Radio (on Mix 107.9 FM), Golden West Broadcasting Ltd. (taped interview—Alberta Snake Hibernaculum Inventory): September 28, 2018
- The Prairie Naturalist (on 91.3 FM CJTR) (live interview – Alberta Amphibians and AVAMP): August 2, 2018

Events

- Scouts Canada: Northern Lights Council, in partnership with the Edmonton YMCA, Great Scouting Adventures in the Park, Gold Bar Park, Edmonton, AB August 28, 2018

Publications

- Reptiles of Alberta (reprinted 2019)
- Amphibians on my land: habitat stewardship in agricultural landscapes (reprinted 2019)

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. Photo: ACA



Amphibians, such as these wood frogs (*Lithobates sylvaticus*), often sing, court, mate, and have their young in plain view of us. Photo: Kris Kendell