

Alberta Conservation Association 2015/16 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
Alberta Society of Professional Biologists
Edmonton Valley Zoo
Parks Canada

Key Findings

- We developed and instructed an Introductory Amphibian Monitoring and Inventory Course in partnership with Alberta Society of Professional Biologists, featuring an array of topics, including identification and ecology of Alberta's amphibians and field techniques to determine species composition, abundance and presence.
- We promoted the Alberta Volunteer Amphibian Monitoring Program through partnerships with the Edmonton Valley Zoo and Parks Canada.
- We delivered lectures to second-year Conservation and Reclamation students at Lakeland College regarding ecology, identification and conservation of native 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, 36 volunteers submitted 80 amphibian and 10 reptile observations to AVAMP, including the location of one 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 while, at the same time, increasing 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 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).

We also chair the Alberta Amphibian and Reptile Specialist Group, where we discuss topics and issues related to conservation and research in Alberta and 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 search for individual amphibians throughout the spring, summer and early fall. Volunteers could also record any reptile observations. We promote AVAMP through our e-mail newsletter and through social media to increase awareness of amphibians and reptiles, and help us maintain relationships with program volunteers and other interested parties. Volunteers self-register and enter their own monitoring data online, where data are then automatically organized into a spreadsheet.

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

Results

In 2015/16, 65 new members joined AVAMP. We instructed 30 participants in an Introductory Amphibian Monitoring and Inventory Course, in partnership with Alberta Society of Professional Biologists, and approximately 50 second-year Conservation and Reclamation students and naturalists at Lakeland College.

Thirty-six AVAMP participants submitted a total of 80 amphibian and 10 reptile observations, including the location of one snake hibernaculum (den). Data submitted by volunteers represented 80% of the amphibian and 40% 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 2015/16.

Species	Taxonomic name	Number of records
Boreal chorus frog	<i>Pseudacris maculata</i>	12
Boreal toad	<i>Anaxyrus boreas</i>	12
Bullsnake	<i>Pituophis catenifer</i>	2
Canadian toad	<i>Anaxyrus hemiophrys</i>	1
Columbia spotted frog	<i>Rana luteiventris</i>	2
Great plains toad	<i>Anaxyrus cognatus</i>	0
Long-toed salamander	<i>Ambystoma macrodactylum</i>	1
Mountain short-horned lizard	<i>Phrynosoma hernandesi</i>	1
Northern leopard frog	<i>Lithobates pipiens</i>	6
Plains garter snake	<i>Thamnophis radix</i>	3
Plains spadefoot	<i>Spea bombifrons</i>	0
Prairie rattlesnake	<i>Crotalus viridis</i>	0
Red-sided garter snake	<i>Thamnophis sirtalis</i>	3
Tiger salamander	<i>Ambystoma mavortium</i>	28
Wandering garter snake	<i>Thamnophis elegans</i>	1
Western hog-nosed snake	<i>Heterodon nasicus</i>	0
Western painted turtle	<i>Chrysemys picta</i>	0
Wood frog	<i>Lithobates sylvaticus</i>	18
Yellow-bellied racer	<i>Coluber constrictor</i>	0
Total		90

We developed two new partnerships to help promote AVAMP, including Edmonton Valley Zoo and Parks Canada. 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.

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

- Fish and Wildlife Enforcement Branch, Northeast Region Unit Meeting: Herpetofauna identification, status, conservation, handling, and safety, Kris Kendell, Edmonton, March 7, 2016.
- Miistakis Institute, Call of the Wetland User-Needs Workshop, Mount Royal University, Kris Kendell, Calgary, February 8, 2016.
- Lakeland College, second-year Conservation and Reclamation students: Ecology, identification and conservation of native reptiles and amphibians, Kris Kendell, Vermilion, November 24, 2015.
- Lakeland Wildlife Club and Vermilion River Naturalists, Kris Kendell, Vermilion, November 24, 2015.

Poster presentations

- Joint Meeting: Idaho Chapter of The Wildlife Society, Washington Chapter of The Wildlife Society, Society Northwestern Vertebrate Biology, and Northwest Partners in Amphibian and Reptile Conservation, Coeur d'Alene, Idaho, February 22–26, 2016.

Publications

- *Amphibian Identifier*, 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.



Alberta Volunteer Amphibian Monitoring Program participants often gather observations of endangered species, such as this mountain short-horned lizard. Photo: Kris Kendell



Citizen scientists often provide valuable data on snakes that are found dead on roads from collisions with vehicles. Shown is a live prairie rattlesnake on a roadway near Jenner, Alberta. Photo: Kris Kendell