

Alberta Conservation Association (ACA)

Date: 2014-2015

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 Sustainable Resource Development
- Alberta Chapter of the Wildlife Society
- City of Edmonton's Master Naturalist Program

Key Findings

- We organized a citizen-science workshop featuring an array of topics, including engaging youth and partners, data collection standards, online social networks, and mobile device applications.
- Through the City of Edmonton's Master Naturalist Program, we are promoting the Alberta Volunteer Amphibian Monitoring Program to residents of Edmonton who are interested in learning more about ecology, naturalization and stewardship of local natural areas.
- We were presented with the Silver Salamander Award by the Canadian Herpetological Society in recognition of efforts by the Alberta Amphibian and Reptile Specialist Group to protect and conserve herpetofauna.
- In total, 30 volunteers submitted 60 amphibian and 37 reptile observations, including 8 snake hibernacula (den) locations.

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, as well as provide a forum for collaboration and communication.

Methods

At sites of their own choice, we encouraged 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 promoted 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 Sustainable Resource Development for entry into the Fisheries and Wildlife Management Information System database.

Results

In 2014/15, one new member joined AVAMP. We circulated two articles and posts of information relating to herpetofauna conservation, habitat stewardship and volunteering in our e-mail newsletter and through social media, respectively. These initiatives resulted in over 265 combined individual views.

Thirty AVAMP participants submitted a total of 60 amphibian and 37 reptile observations, including 8 snake hibernacula (den) locations. Data submitted by volunteers represented 80% 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 2014/15.

| Species | Taxonomic name | Number of records |
|------------------------------|--------------------------------|--------------------------|
| Boreal chorus frog | <i>Pseudacris maculata</i> | 16 |
| Boreal toad | <i>Anaxyrus boreas</i> | 2 |
| Bullsnake | <i>Pituophis catenifer</i> | 8 |
| Canadian toad | <i>Anaxyrus hemiophrys</i> | 5 |
| 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> | 18 |
| Plains garter snake | <i>Thamnophis radix</i> | 14 |
| Plains spadefoot | <i>Spea bombifrons</i> | 4 |
| Prairie rattlesnake | <i>Crotalus viridis</i> | 5 |
| Red-sided garter snake | <i>Thamnophis sirtalis</i> | 5 |
| Tiger salamander | <i>Ambystoma mavortium</i> | 5 |
| Wandering garter snake | <i>Thamnophis elegans</i> | 5 |
| Western hog-nosed snake | <i>Heterodon nasicus</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 | | 97 |

We developed two new partnerships to help promote AVAMP; these included the Alberta Chapter of the Wildlife Society and the City of Edmonton's Master Naturalist Program.

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

- 70th Gold Bar Scout Group, Kris Kendell, March 24, 2015
- Edmonton Gardening Vegetarian and Vegan Group, Kris Kendell, November 30, 2014
- Environmental Studies, University of Alberta, Augustana Campus, Kris Kendell, November 3, 2014

- Wildlife and Greenspace Stewardship Speaker's Series, Kris Kendell, August 7, 2014
- Canadian Forces Base Environmental Officer Meeting, Kris Kendell, June 19, 2014
- Junior Forest Wardens, Kris Kendell, April 10, 2014

Poster presentations

- Alberta Chapter of the Wildlife Society Conference, Edmonton, AB, Kris Kendell, March 20–22, 2015
- Citizen Science: Expanding Science Knowledge and Ecological Literacy Workshop, Portland, OR, Kris Kendell, February 24, 2015
- Society for Northwestern Vertebrate Biology Conference, Portland, OR, Kris Kendell, February 24–27, 2015
- Canadian Herpetological Society Conference, Calgary, AB, Kris Kendell, September 12–14, 2014
- Edmonton Reptile and Amphibian Society Expo, Edmonton, AB, Kris Kendell, October 4–5, 2014

Publications

- “Forever Young,” *Conservation Magazine*, Spring/Summer 2014, Kris Kendell

Literature Cited

Alberta Sustainable Resource Development. 2010. The general status of Alberta wild species 2010. Available online:
<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 northern leopard frog. Photo: Kris Kendell



Citizen scientists often provide valuable data on elusive species, such as this tiger salamander.
Photo: Len Peleshok



Alberta Volunteer Amphibian Monitoring Program participants are encouraged to submit general reptile sightings, including road mortality observations (bullsnake shown). Photo: Alberta Conservation Association