

**Alberta Conservation Association**  
**2020/21 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 Biodiversity Monitoring Institute

Alberta Environment and Parks

Volunteer participants

**Key Findings**

- We published an article in *The Canadian Herpetologist*, celebrating the 25-year history and accomplishments of the ACA-chaired Alberta Amphibian and Reptile Specialist Group.
- We provided expertise on conservation priorities and potential education messaging for Alberta snakes in the Canadian Snake Integrated Collection Assessment and Planning Workshop, hosted by the Canadian Species Initiative.
- We are partnering with the Alberta Biodiversity Monitoring Institute (ABMI), trialing their free, NatureLynx mobile application to simplify the way AVAMP participants make and report their observations. Ten amphibian records were submitted through ACA's AVAMP Group on ABMI's NatureLynx platform in 2020.
- In total, 58 volunteers submitted 113 amphibian and 30 reptile observations to AVAMP, including the location of eight snake hibernacula (dens).

## **Abstract**

Volunteers play a crucial role in wildlife conservation efforts through their involvement in biodiversity-related citizen science projects. The Alberta Volunteer Amphibian Monitoring Program (AVAMP) invites people to engage with nature and to provide unique information on amphibian and reptile distribution and life-cycle events. To streamline the way AVAMP participants make and report their observations, we are partnering with Alberta Biodiversity Monitoring Institute and trialing their free NatureLynx mobile application. The NatureLynx app allows AVAMP participants to complete data entry in the field. Data submissions are accessible by ACA and are organized by the app in an AVAMP community group established in 2019. In 2020/21, 58 participants from AVAMP submitted 113 amphibian and 30 reptile observations, including locations of eight snake hibernacula (dens) directly through AVAMP. An additional ten amphibian records were submitted through the AVAMP Group on ABMI's NatureLynx platform. Combined, these data represented 90% of the amphibian and 33% of the reptile species native to the province. Setting appropriate conservation measures for amphibians and reptiles requires a good understanding of species distributions and timing of life-cycle events, which are often based on relatively few observation records. AVAMP is an example of how ACA can work with a network of enthusiastic volunteers and partners to fill these data gaps and positively impact conservation.

## **Introduction**

One of Alberta Conservation Association's (ACA's) largest wildlife volunteer-based projects is the Alberta Volunteer Amphibian Monitoring Program (AVAMP). Through volunteering, AVAMP participants are provided with opportunities to increase their knowledge of wildlife and conservation issues, use their skills and experiences to contribute to conservation, and network with wildlife professionals. Data collected by AVAMP volunteers increases our knowledge of amphibian and reptile distributions, along with other data, assists in updating their general status (Government of Alberta 2017) and provides valuable information for land-use planning efforts.

We chair the Alberta Amphibian and Reptile Specialist Group (AARSG), where we discuss topics and issues related to conservation and research of amphibians and reptiles in Alberta. These meetings also provide a forum to explore opportunities for collaboration. The AARSG has

garnered a strong sense of community among professionals, graduate students, and citizen science groups in Alberta that are interested in amphibians and reptiles. In 2017, we became a member of the International Union for Conservation of Nature Species Survival Commission Amphibian Specialist Group, 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 on the web or mobile app.

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 2020/21, 49 new members joined ACA's AVAMP platform. In all, 58 AVAMP participants submitted a total of 113 amphibian and 30 reptile observations, including eight snake hibernaculum (den) locations, through ACA's data submission portal. An additional ten amphibian records were submitted through the AVAMP Group on ABMI's NatureLynx

platform. Combined, data submitted by volunteers represented 90% of the amphibian and 33% 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 2020/21.

Species	Taxonomic name	Number of records	
		ACA <sup>1</sup>	NatureLynx <sup>2</sup>
Boreal chorus frog	<i>Pseudacris maculata</i>	23	1
Boreal toad	<i>Anaxyrus boreas</i>	17	1
Bullsnake	<i>Pituophis catenifer</i>		
Canadian toad	<i>Anaxyrus hemiophrys</i>	6	
Columbia spotted frog	<i>Rana luteiventris</i>		
Great plains toad	<i>Anaxyrus cognatus</i>	2	
Long-toed salamander	<i>Ambystoma macrodactylum</i>	1	
Mountain short-horned lizard	<i>Phrynosoma hernandesi</i>		
Northern leopard frog	<i>Lithobates pipiens</i>	7	
Plains garter snake	<i>Thamnophis radix</i>	20	
Plains hog-nosed snake	<i>Heterodon nasicus</i>		
Plains spadefoot	<i>Spea bombifrons</i>	4	
Prairie rattlesnake	<i>Crotalus viridis</i>		
Red-sided garter snake	<i>Thamnophis sirtalis</i>	7	
Tiger salamander	<i>Ambystoma mavortium</i>	23	1
Wandering garter snake	<i>Thamnophis elegans</i>	3	
Western painted turtle	<i>Chrysemys picta</i>		
Wood frog	<i>Lithobates sylvaticus</i>	30	7
Yellow-bellied racer	<i>Coluber constrictor</i>		
<b>Total</b>		143	10

<sup>1</sup>ACA online data submission portal; <sup>2</sup>ABMI's NatureLynx AVAMP Group

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 methodologies.

## **Conclusions**

Data from AVAMP volunteers will provide a better understanding of the distribution and status of Alberta's amphibians and reptiles in the province. AVAMP is an example how ACA can work with a network of enthusiastic volunteers and partners 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*

- Environmental and Conservation Sciences Students' Association, University of Alberta, Webinar, 14 January 2021
- Shell Canada Ltd., Lunch n' Learn, Webinar, 15 December 2020

### *Publications*

Kendell, K. and Russell A. 2020. The Alberta Amphibian and Reptile Specialist Group: 25 Years (1996-2020) of Collaborative Endeavour. In: *The Canadian Herpetologist*. Volume 10 Number 1. Pages 12-16.

## **Literature Cited**

Government of Alberta. 2017. Alberta Wild Species General Status Listing – 2015. Edmonton, AB. 24 pp. Retrieved from:  
<https://open.alberta.ca/publications/alberta-wild-species-general-status-listing-2015>

## Photos



The Alberta Volunteer Amphibian Monitoring Program logo. Photo: Alberta Conservation Association



The boreal chorus frog (*Pseudacris maculata*), shown here, is good at camouflaging and is more often heard than seen. Their loud distinctive breeding call is often described as a vibrant repeated 'cree-ee-ee—eek' with a rising inflection. Large choruses of calling males may carry more than 1 km in distance from a breeding site. Photo: Kris Kendell