

**Alberta Conservation Association
2008/09 Project Summary Report**

Project name: *Alberta Volunteer Amphibian Monitoring Program*

Project leader: Kris Kendell

Primary ACA staff on project:
Kris Kendell

Partnerships:
Alberta Sustainable Resource Development
TD Friends of the Environment Foundation

Key Findings:

- 41 volunteers provided 337 amphibian observation records and 7 reptile sightings over the past year, including 2 snake hibernacula locations.
- Over 800 volunteers receive our biannual newsletter “Croaks and Trills”.
- We created the Reptiles of Alberta brochure to foster public awareness and knowledge of reptiles in AB.

Abstract

The Alberta Volunteer Amphibian Monitoring Program (AVAMP) was established to support a global initiative to monitor amphibian populations in response to widespread declines in populations and numbers in many jurisdictions. Our objectives are to engage volunteers to better understand the distribution of amphibian and reptile populations in AB, and to heighten public interest in this dynamic group of species. In 2008, AVAMP participants submitted a total of 337 amphibian and seven reptile observations; including two hibernacula locations. To foster interest and a greater understanding of the needs of amphibians and reptiles, we provide volunteers with a monitoring manual, CD of frog and toad calls, and biannual newsletter. The newsletter also provides a communication conduit between the scientific community and the general public.

Introduction

Throughout history, amateur citizen scientists have contributed to the advancement of conservation through volunteer activities. The Alberta Volunteer Amphibian Monitoring Program (AVAMP) is a long-term community survey of amphibians that was implemented in 1992, under the auspices of the Declining Amphibian Population Task Force established by the Species Survival Commission of the International Union for Conservation of Nature. Alberta Conservation Association has been leading the program in Alberta since 1997.

The program strives to foster an increased awareness of the ecological world and assists biologists with the detection of new amphibian and reptile populations in the province. Data collected by volunteers contributes to an increased understanding of the distribution and the general status of Alberta's amphibian and reptile species and is used, along with other data, to assist in updating the general status of amphibians in Alberta. AVAMP acts as a centre for data and information exchange with non-government, consultants, interpreters, government, academic institutions, and the general public.

Methods

We provide participants of AVAMP a peer-reviewed monitoring manual and a CD featuring the calls of frogs and toads of Alberta. Within the manual are instructions and guidance on how to monitor amphibians, as well as how to record and submit observations. A dedicated toll-free phone number (1-877-777-FROG) and email is available for participants to conveniently contact the program coordinator if they have questions about the program, amphibian identification, or conservation issues relating to amphibians and reptiles in Alberta. We distribute a biannual newsletter (Croaks and Trills) to support and maintain a relationship and effective communication with volunteers.

At sites of their own choice, we encourage volunteers to listen for calling frogs and toads in the spring and search for individual amphibians during the spring, summer, and early fall. The time and effort volunteers put into the program is entirely up to them. We review, verify, and compile the volunteer data and forward it to the government for upload into the provincial database (Fisheries and Wildlife Management Information System database).

Results

In 2008, 41 individuals, families, organizations, and/or groups signed up to become members of AVAMP, bringing the total number of program members to over 800. All program members received the biannual newsletter, "Croaks and Trills", and the newsletter was also widely available through the program's web page, and during public presentations and meetings.

AVAMP participants submitted a total of 337 amphibian and seven reptile observations; including two hibernacula locations. Observations submitted by volunteers represented 100% of the amphibian and 25 % of the reptile species found in the province. (Table 1).

Table 1. Number of records of each amphibian and reptile species observed by AVAMP participants in 2008-09.

Species	Taxonomic name	Number of Records
Boreal Chorus Frog	<i>Pseudacris maculata</i>	90
Boreal Toad	<i>Bufo boreas</i>	32
Bullsnake	<i>Pituophis catenifer sayi</i>	0
Canadian Toad	<i>Bufo hemiophrys</i>	15
Columbia Spotted Frog	<i>Rana luteiventris</i>	34
Great Plains Toad	<i>Bufo cognatus</i>	7
Long-toed Salamander	<i>Ambystoma macrodactylum</i>	16
Mountain Short-horned Lizard	<i>Phrynosoma hernandesi</i>	0
Northern Leopard Frog	<i>Rana pipiens</i>	22
Plains Garter Snake	<i>Thamnophis radix</i>	5
Plains Spadefoot	<i>Spea bombifrons</i>	9
Prairie Rattlesnake	<i>Crotalus viridis</i>	0
Red-sided Garter Snake	<i>Thamnophis sirtalis</i>	2
Tiger Salamander	<i>Ambystoma tigrinum</i>	12
Wandering Garter Snake	<i>Thamnophis elegans</i>	0
Western Hog-nosed Snake	<i>Heterodon nasicus</i>	0
Western Painted Turtle	<i>Chrysemys picta</i>	0
Wood Frog	<i>Rana sylvatica</i>	100
Total		344

We provided advice on the natural history, distribution, and monitoring techniques and methodologies relating to Alberta's amphibian and reptiles to more than 60 individuals, agencies, and organizations to help facilitate a variety of research projects and initiatives in the province as well as in other jurisdictions.

Conclusions

AVAMP positively impacts conservation in Alberta through increased public awareness, understanding, and appreciation of Alberta's biodiversity. Programs such as AVAMP also recognize and embrace the valuable resource of public involvement and offer the general public an opportunity to become directly involved with conservation and provide value-added opportunities to a number of outdoor recreational activities.

AVAMP is a plausible and cost-effective program that assists biologists in the detection of new amphibian and reptile populations in the province that may otherwise go undetected. Data collected by volunteers ultimately provides an increased understanding of the distribution and the general status of Alberta's amphibian and reptile species.

Communications

- Guest Speaker - Wagner Natural Area Society Open House. St. Georges Anglican Church, Edmonton, AB. 5 November 2008.
- Guest Lecturer - The conservation and management of endangered species (ENCS 464), Department of Renewable Resources, University of Alberta, Edmonton, AB. 16 October 2008.
- Guest Speaker - Grandview Heights School, Grade 5, Edmonton, AB. 19 June 2008.
- Guest Speaker - Environment Week, Magrath, AB. 6 June 2008.
- Publication - Kendell, K. 2008. Prairie rattlesnake/bullsnake *side bar*. In: Conservation (ACA magazine – Spring/Summer 2008) page 13.
- Poster Presentation - Canadian Amphibian and Reptile Conservation Network annual general meeting. Alberta Volunteer Amphibian Monitoring Program. Montreal, Quebec, 23-28 July 2008.
- AVAMP coordinator chaired the Alberta Amphibian and Reptile Specialist Group meeting in June 2008.

Literature cited:

Alberta Sustainable Resource Development. 2005. The General Status of Alberta Wild Species 2005. Alberta Sustainable Resource Development, Fish and Wildlife Service, Edmonton, Alberta. [Online] www3.gov.ab.ca/srd/fw/speciesatrisk/index



Columbia Spotted Frog (*Rana luteiventris*) basking on rock at Westcastle Wetlands Ecological Reserve in mid July (Photo: Kris Kendell)



Red-sided garter snake (*Thamnophis sirtalis*) at hibernaculum in Fish Creek Provincial Park, Calgary. (Photo: Kris Kendell)