

Do Predator Bounties Work?



Myrna Pearman

**Thursday, October 27
7:30 PM
Kerry Wood Nature Centre,
Red Deer**

Dr. Proulx will review methods used to kill wolves and coyotes, and the status of bounties in Alberta. He will report on the first year of a research program on the food habits of coyotes and wolves in counties with and without bounties. He will also briefly discuss alternatives to lethal management methods which can be implemented by ranchers and producers.



Dr. Gilbert Proulx is the Director of Science at Alpha Wildlife Research and Management. He is the Editor-in Chief of the Canadian Wildlife Biology and Management Journal and is the Past Chair of the Martes Working Group (1995 to 2015). From 1989 to 1993, he was Head of the Wildlife Section of the Alberta Research Council and, from 1990 to 2002, was an Adjunct Professor at the University of Alberta. Dr. Proulx has 40 years of field experience and has published more than 130 scientific articles and 14 textbooks and field guides. His main research interests focus on mammals, particularly in forest and agriculture ecosystems, and on technology development, mainly on mammal trapping and detection methods.



- Admission free and open to the public

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SEASONAL SIGHTS AND SOUNDS OF ALBERTA:

ECHOLOCATING CALLS OF THE MICROCHIROPTERANS

By Dr. Sally Stuart

It is fascinating wandering around in the dark, hearing chirping sounds and watching the sonograms but being unable to see the actual creatures. Dusk arrives early in late September, and on a recent evening outing, I detected only one Silver-haired Bat. Summer is retreating and most bats have now migrated for winter.

Bats, which evolved about 50 million years ago, are very ancient mammals. They are the only mammal capable of true flight.

Most bat species arrive in Central Alberta in late May, when the females are about to give birth to their young. Bats may roost in old buildings, roofs, in tree foliage, under tree bark or in holes excavated by birds.

All Alberta bats are insectivorous, taking advantage of the abundant but short supply of insects available during the summer season. Bats make use of a food source for which there is not much competition, particularly as most species hunt predominantly at dusk but also dawn and throughout the night. Furthermore, many of the invertebrates they catch may be harmful agricultural pests.

Alberta bats vary in size from the tiny Western Small-footed Bat, which weighs about 6 grams, to the largest Alberta bat, the Hoary Bat, which weighs a whopping 35 grams. Bats have an incredibly high metabolic rate (they burn through their food energy quickly) and are found at the farthest northern reaches of their range here.

The nine species of bats in Alberta all belong to the suborder *microchiroptera* (the smallest member of which weighs a miniscule 1.5 grams!).

Bats produce sounds in a similar way that humans use their larynx. However, the main difference is that their sounds are very high frequency sounds (ultrasounds) and will exit through the mouth or, in some species, the nose. The sound waves hit objects and bounce off, thus creating a returning echo. It is the returning echo that the bat uses to track and capture prey (but also for navigation and communication between members of their own species).

In theory, a human ear can hear up to 20 kHz (although many of us have lost this ability a long time ago), whereas most bats produce sounds above this, in some cases up to 200 kHz.

How do bats hear such high frequency sounds? Enlarged and folded external ears help, but recent research also indicates that there may be modifications in the inner

ear (where the sensory cells are located).

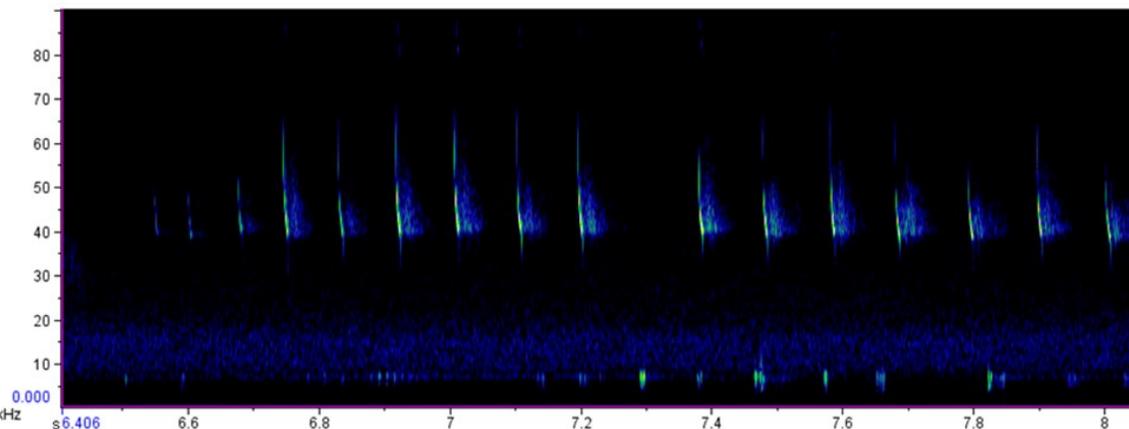
This year, I was able to record bat echolocation using a small specialised microphone attached to an iPad. A free app both produced sonograms (picture of the sounds) and slowed the sound down, hence making the sounds audible to the human ear as a series of high pitched chirps.

Using a continuous recording monitor, which recorded bats from dusk until dawn one night in mid-July, 600 calls were recorded! At one point, seven of the possible bat species *appeared* to have been present on our small acreage. However (and unfortunately), recording bats is far more complicated than birds and it is not easy to identify bats from their calls.

There is extensive frequency overlap in certain bat species, and frequencies change as the bats search, approach and capture prey. Finally, bats may adjust their calls if hunting with other bats, either members of their own species or other species. By examining the sonograms from different species of bats, different feeding strategies can be observed. Without a doubt, the most frequently recorded bat on our land was the Little Brown Bat (*Myotis lucifugus*), a small but maneuverable bat which can be observed flying in and out of the trees. Its sonogram is shown here. It produced sounds at frequencies often above 80 kHz; they rapidly drop from 80 to 40 kHz and are of a very short duration, often 1 to 2 milliseconds.

High frequency calls mean shorter wavelengths, this and the rapid modulations in the frequency (as shown in the sonogram) make it excellent at detecting smaller invertebrates such as mosquitoes. The problem with this species is that it can be difficult to differentiate from the four other *Myotis* species. It is easiest to accurately identify bats which generate low frequency sounds as these will travel longer distances. Of the calls recorded this summer, one of the easiest to identify was the rather beautiful Hoary Bat (*Lasiurus cinereus*). They are large and fast, but less maneuverable than the Little Brown Bat, so they tend to be found in open areas. The calls produced are of a fairly constant frequency of 20 kHz or lower, and may last for several milliseconds. These low frequency sounds mean that they are unable to detect really small insects, so Hoary Bat pursue larger invertebrates such as moths (everything is relative and they may still be only about 7mm!).

With the cold weather approaching, the food supply declines and it is impossible for bats to support their high metabolic rate. Bats must either migrate south to warmer climates, like many Canadians, or hibernate in locations such as caves. Yet again we can marvel at a creature with sensory perceptions far superior to humans.



REPORT ON ALBERTA PARKS VOLUNTEER STEWARD CONFERENCE

Story and Photos by Bertha Ford

The Alberta Parks Volunteer Steward Conference was held in Slave Lake from Sept 9 to 11. Located in the boreal region, 408 km from Red Deer, Lesser Slave Lake Provincial Park is beautiful and diverse with mature boreal forest, 1500 year-old sand dunes, wetlands and on a migratory route for song birds.

The new Boreal Center for Conservation is the visitor center for the park with education programs and interesting displays. Just outside the center is the 600-m songbird trail where I have heard ovenbirds and other warblers, and research is conducted on saw-whet owls.

Lesser Slave lake Bird Observatory oversees the banding of migrating and nesting song-birds in the spring and fall. To date the count is 254 species. This year the top 10 birds in the mist nets were Myrtle Warbler, American Redstart, Swainson's Thrush, Tennessee Warbler, Ovenbird, Yellow Warbler, White-throated Sparrow, Canada Warbler, Least Flycatcher and Chipping Sparrow.

Just north of the town is the 5-km natural white sand Devonshire Beach. On the

Whispering sands trail, excellent interpretive signs take you through ancient sand dunes, old lake bottoms, wetlands and forest. On September 10, we came across abundant wild blueberries, which were a treat! The rare Sitka Willow is found along the beach where we observed the formation of new sand dunes.

Martin Mountain, at 938 m, is the highest point with great views. The *Walk through Time* trail at the mountain features ancient forest with Lodgepole Pine, Balsam fir, Devil's club and rare plants in this unique foothills ecosystem in the boreal forest.

There were a host of activities available to conference participants, from fire recovery and firesmart to owling and sessions on lichens and parks along the Peace River. Dr. Joyce Gould presented a session on Sitka Willow and rare plants; we now need to look for the rare Red Collar Moss that grows on moose dung!

We also visited the new Legacy Center, built by 12 oil companies in collaboration with the community following the 2011 fires. A 23-km Trans-Canada trail follows the entire length from the Devonshire Beach, the bird observatory, boreal center and continues to Martin River Campground on the north end of the Park.

The town has excellent accommodations

and Lesser Slave lake Provincial Park is well worth the visit for its beauty and unique diverse habitats.



RDRN 2016 FALL BANQUET



Story by Phil French, Photos by Keith Kline

A crowd of over forty people took in the Annual RDRN Fall Banquet at Red Deer's historic Pioneer Lodge. After an excellent meal provided by "Maggie's Catering," President Tony Blake introduced archivist and historian Michael Dawe. Michael presented a 125-year history of the natural history movement in Central Alberta. His presentation, entitled *A Green and Pleasant Land*, kept everyone enthralled with stories and pictures of the many characters and places that make up the story of our region and the early days of our organization. One of the many topics that Michael revealed to his audience included old photographs of well-known places. It was fascinating to see the changes that have occurred to familiar habitat over a hundred year period.

After Michael's presentation, Don Wales presented the 2016 Owl Award to long-time member and Past-President Phil French for his contributions to the Red Deer River Naturalists. At the end of the evening, door prizes were drawn for, including two copies of Michael's sought-after book: *Red Deer, The Memorable City* and Myrna Pearman's *Backyard Bird Feeding: An Alberta Guide*. Dorothy Dickson also kindly donated several volumes from her own collection, which contributed to a fun evening.



SATURDAY NATURE HIKES WITH KEITH KLINE

All sessions are on Saturdays and start at 1:30 PM. For more information, contact Keith Kline at redkline@hotmail.com or call 403-347-6883

October 1: Maskepetoon—Meet in the parking lot of the playground before Overand Place.

October 15: Heritage Ranch—meet in the first parking lot.

October 22: Riverbend—Meet in the parking lot at the bottom of the hill as you enter Riverbend.

October 29: South of the College—Meet in the southwest parking lot by the weather station.

Keith Kline's Images and Species List for Nova Nature Trail walk: Canada geese, crow, great-blue heron, red-tailed hawk, mallard, flicker, yellow-rumped warbler, American tree sparrow, vesper sparrow, tree swallow, raven, savannah sparrow, downy woodpecker, black-capped chickadee, red-necked grebe, coots, pied-bill grebe, American goldfinch, northern shoveller



SAPAA MEETING: The Stewards of Alberta's Protected Areas Association (SAPAA) will hold its AGM on Saturday, October 15th at the KWNC. The public is welcome to attend the morning program:

9:30 A.M.—Alison Ronson from CPAWS: 2015 CPAWS *Conservation Blueprint for Northern Alberta*.

11:00 A.M.—Dr. Geoff Holroyd: *Beaverhill Natural Area and Bird Observatory: Conservation by a SAPAA member*.

FLOWER FOCUS October 19: Fun With Fruit

This session starts with a short walk through the Sanctuary followed by a closer examination using all the senses.



Photos by Don Wales

November 16: Tundra flowers of Eastern Greenland
Colorful life in a harsh landscape

10:00 AM • KWNC • Call Don for details (403 343-2937)

The Red Deer River Naturalists, the first natural history organization to be established in Alberta, was incorporated as a society in 1906. The objectives of the society are to foster an increased knowledge, understanding and appreciation of natural history, and to support conservation measures dealing with our environment, wildlife and natural resources.

Annual membership is \$15.00 for individuals and \$20.00 for families.

Regular meetings are held at 7:30 p.m. on the fourth Thursday of most months at the Kerry Wood Nature Centre, 6300-45 Ave., Red Deer, AB. Non-members are welcome.

Members are encouraged to contribute to this newsletter. The deadline is the last Friday of the month.

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Beauty Everywhere:

Nature Photo Essays by Myrna Pearman



FIVE YEARS OF RED DEER ADVOCATE COLUMNS

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