

# Nature Alberta

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REDHEAD DRAKE AT COOKING LAKE. BRIAN GENEREUX

*feature article*

## Cooking Lake



A BEAUTIFUL SKY HIGHLIGHTS THE SPECTACULAR COOKING LAKE! SEE THE FEATURE STORY, PG 22. GERALD ROMANCHUK

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Celebrating our natural heritage*

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Nature Alberta is composed of natural history clubs from across the province. The aims of the Federation are:

- To encourage among all Albertans, by all means possible, an increase in their knowledge of natural history and understanding of ecological processes;
- To promote an increase in the exchange of information and views among natural history clubs and societies in Alberta;
- To foster and assist in the formation of additional natural history clubs and societies in Alberta;
- To promote the establishment of natural areas and nature reserves, to conserve and protect species, communities or other features of interest;
- To organize, or coordinate symposia, conferences, field meetings, nature camps, research and other activities whether of a similar or dissimilar nature;
- To provide the naturalists of Alberta with a forum in which questions relating to the conservation of the natural environment may be discussed, so that united positions can be developed on them, and to provide the means of translating these positions into appropriate actions.

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"THE MADNESS ABOUT WIND TURBINES: FROM THE DREAM OF ENVIRONMENTALLY FRIENDLY ENERGY TO HIGHLY SUBSIDIZED DESTRUCTION OF THE COUNTRYSIDE." DER SPIEGEL, MARCH 29, 2004

# Editor's Page

BY DENNIS BARESCO

## GREEN ENERGY TUG-OF-WAR

From what I've read and heard, there's little doubt that wind energy on an industrial scale is one of the best ways out of our dependency on fossil fuels and one of the major methods of reducing human-caused, climate-altering emissions. Clean, green energy on an industrial scale is widely supported by government, the alternative-energy industry, environmental groups and the public in general. Solar (and to a lesser extent at this point, geothermal and tidal) are also in the green energy mix, but wind seems to be the major thrust.

Those who complain about the ecological effects of industrial-scale wind energy are told quite simply that if we do not reduce emissions, the effects will be far worse, far more devastating to the natural world. Of course, it's not that simple because, although that statement is true, it makes a not-very-subtle assumption that wind energy is one of the best solutions. Is it? Much depends on what we read and hear, what we

accept as fact and our ability to separate fact from promotion or myth.

Reading business-oriented news and/or articles certainly aids in clarifying what is going on with alternative energy. That clarity helps us greatly to determine our approach to the energy tug-of-war. What we read in business news is that exploration, development, sale and use of the major fossil fuels – coal, oil and natural gas – continue, almost in a frenzy. There is no intention whatsoever to reduce the use of fossil fuels; in fact, the intent is to increase the use to whatever the market will bear. Governments in North America are almost all on board (notwithstanding their pronouncements). The reason? Money, to put it simply.

Don't believe me? Well, we have a giant coal corporation pushing for a coal port on the Washington coast for shipping millions of tons of coal to Asia. That port is but "the tip of the (rapidly melting) iceberg for the coal industry," as the Rainforest Action Network put it. The coal industry everywhere continues to try to expand markets and boost

production.

We can't really blame them; that's their mandate. Clean coal? Not quite as dirty, maybe. But clean? Good luck with that, most experts say.

When it comes to oil, we have exploration, production, sales, use and plans for the aforementioned continuing virtually unabated – even from potentially dangerous and/or destructive sources like off-shore, the Arctic and the tar sands. The profits are staggering, which is why conserving oil is pretty well limited to rhetoric. Carbon capture? Even if it does someday work (about which most experts are very skeptical), it is prohibitively expensive with very limited usefulness (hence a negligible effect on emissions) and unknown consequences for underground geology.

We have an explosion of natural gas finds (hence the declining prices) from unconventional sources like shale gas and coalbed methane. Fortunately, natural gas is much cleaner than coal and oil, because no one has any intention of reducing the amount used – quite the



THE ECOLOGICAL FOOTPRINT INCREASES SUBSTANTIALLY AS THE NUMBER OF TURBINES INCREASES. WWW.WIND-WATCH.ORG

opposite, particularly in the tar sands, which according to an article in *CCPA Monitor* (Vol 17, No. 1, May 2010), will by 2012 be using enough natural gas every day to heat 11.5 million homes in Canada for 24 hours.

Gosh, that all sounds very negative. However, we should look on the positive side. Shouldn't expanded wind energy essentially force the reduced use of fossil fuels? To that, we could ask: exactly how?

Electric cars, for reasons already well explained elsewhere, are an impractical pipe dream for now and probably years to come. Just one of the many problems is the requirement for massive expansion of the hugely expensive transmission grid (Hydro-Quebec has said that it can only accommodate about 1,000 plugged-in electric cars).

Because wind energy is so inefficient and erratic, back-up power plants (mostly coal throughout the world) must be on stream and producing electricity all the time. Not a single coal plant has been decommissioned because of wind energy.

How facts are framed provides insight into wind energy promotion. How many times have you read, "Power from the new windfarm is the equivalent of taking 100,000 cars off the road!" Not only is that comparing apples 'n oranges, but it is rather humorous, since not a single one of Canada's approximately 17 million cars and trucks have been taken off the road; from the number of those announcements I've read, there should be almost NO cars left on the road.

I mention that because one of the often hidden problems with such announcements, and likewise those touting the number of homes that windfarms could power, is that unless it is specifically stated, we don't know if they are referring to **potential** or actual power production. If potential, it is like claiming that your car could go 120 km on only one litre of gas. Well, it could if it wasn't for gravity, friction and resistance. A

## On the Covers:



### FRONT COVER

The Redhead (*Aythya americana*), a diving duck, can be found throughout most of Alberta. More than any other duck species, the Redhead exhibits nest parasitism: the laying of eggs in another bird's nest; in this province, Mallards and Lesser Scaups are the most common hosts. Brian Genereux's photo has perfectly captured the beauty of the Redhead drake.



### INSIDE FRONT COVER

Dark storm clouds...a lovely rainbow...calm and reflective water: it is scenes like this, by photographer Gerald Romanchuk, that constantly remind naturalists why they are naturalists, why the natural world has such meaning and value...and why preserving areas like Cooking Lake is so significant for our well-being and the future. The Feature Story begins on pg 22.

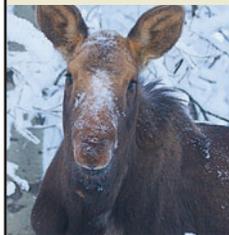


### INSIDE BACK COVER

Long-eared Owls (*Asio otus*) overwinter in Alberta, albeit in small numbers. Secretive, mostly quiet and exclusively a nocturnal hunter during breeding season, it is seldom seen. Finding it on a fence post in the open prairie in winter, as Mark Schiebelbein did, is a treat for birders and photographers! See the story, pg 33.



Softly coloured with a red cap and pink blush, it is easy to see why the Common Redpoll (*Carduelis flammea*) is called "the Christmas bird." Holle Hahn was delighted when a flock showed up at her feeder. The number of redpolls showing up in winter is hit 'n miss: sometimes in abundance, other times very few, occasionally none.



While Moose (*Alces alces*) are not that easy to find in the Cypress Hills, Rick Price seems to have a knack for it. Four Moose were introduced into Cypress Hills Provincial Park in 1956 and seem to have become, if not abundant, at least well established.



### BACK COVER

Like our other two smaller weasels, the Long-tailed Weasel (*Mustela frenata*) turns white in winter, except for the tip of its tail. Found mostly in the southern half of the province, it is a fascinating creature to watch, should the opportunity ever arise. Long-tailed Weasels also make splendid and artful photographic subjects,

as Len Pettitt's photo illustrates perfectly. See the story (and a photo that shows how the predator can become prey!) on pg 6.

parallel can be applied to wind farms, where efficiency runs, on average, 20% to 35% – and often barely at all when the need is greatest. One person suggested that it's like buying a car that only runs 20 to 35 per cent of the time: not a great investment if you are paying for it yourself!

If all that is the case, we might ask sceptically, why isn't the media reporting all this? Why the widespread support, promotion, subsidies and huge growth in the wind industry? To the first question, the media has been reporting it; the *Globe & Mail*, for example, has had many articles over the last few years carefully and factually outlining many of the problems of wind energy. To the second question, business news has provided the main answers for a long time and those answers are now creeping into mainstream news and politics. One example: In late February and in reference to "Clean Energy" from wind and solar (Ontario has stopped calling it "Green Energy"), Ontario Energy Minister Brad Duguid put it best: "We're creating thousands of jobs. We're attracting billions of dollars of investment . . ." and then, in what a skeptic might have seen almost as an aside, the vague, political *de rigueur*, motherhood statement, "...and we're building a cleaner brighter future for our kids."

That's right: more and more, alternative energy is becoming simply a new mega-industry; it's the economy, jobs and profit on the backs of consumers and/or taxpayers. To their credit, most

**THOUGH EXPENSIVE AT THIS POINT, SOLAR ENERGY IS IDEAL FOR ROOFTOPS, AND MANY GREAT PROJECTS ARE IN THE WORKS. BUT IN THE COUNTRYSIDE, IT IS A DIFFERENT STORY ECOLOGICALLY.** PHOENIX SOLAR PROJECT

energy companies are definitely trying to reduce emissions and pollution from fossil fuels, but the promotion and campaign to save the planet from climate change through wind energy often appears to be mostly hype to appease environmentalists.

However, as has been reported by numerous sources, the subsidies, coupled with the recent and continuing economic tsunami, have led many countries with the most experience in industrial wind and solar energy production to put on the brakes. Denmark is the country most often cited by proponents as the model cleanest-of-the-clean: How many times have we heard: "Denmark gets 20% of its electricity from wind power; why can't we follow their lead?!" Good point, except Danish researchers discovered in 2005 that while wind turbines saved consumers \$200 million in energy costs, these same consumers paid the wind industry \$280 million in subsidies. Denmark has now stopped subsidies for wind power and only allows new turbine installations off-shore. France and Spain are drastically cutting wind and solar subsidies,

One statistic you never hear about Denmark: it generates about half its electricity from coal – a proportion that, despite its former obsession with wind power, hasn't varied in a decade.



Britain may be forced to, and Japan is re-evaluating.

There's another reason for pulling back, at least in some jurisdictions: the realization that many windfarms are being built with, at best, little or token concern for the natural environment. For a long time, the approach has been that, if it's declared green, it's good for the environment and no more analysis is required. As Michel Chevalier, a columnist with real estate publication REM online.com, says: "Most of us used to think that green is good, and that wind energy is renewable and green, so it's good, without doing any research and with limited knowledge" ("Opinion: The case against industrial wind turbines"; *REM online.com*; Feb 2, 2011).

That view of things is most prevalent with the public, but also with environmental groups whose members should really know better. Whatever happened to the precautionary principle? After all, the evidence has been piling up for years that wind energy is potentially damaging – from economic, social, rural quality of life, tourism, health, water quality, wildlife, land degradation, property value, democratic and environmental perspectives. (And yes, despite efforts to pooh-pooh health problems as "all in their

heads,” thousands of people can testify that their ailments are real, not psychological.) Says Chevalier: “Forging ahead and consciously ignoring mounting negative evidence is seriously irresponsible.” It is worth noting that it takes very little effort to find the evidence from credible sources.

That may be changing a bit. Ontario recently announced a moratorium on offshore wind farms, “perhaps the first sign” says Dr. Jatin Nathwani “in an awakening, a more sophisticated understanding of the ramifications of implementing ‘green’ energy options. Much closer attention to the environmental impacts of such systems . . . is required” (*Globe & Mail*, “Red flags on green energy”; Wed, Feb.16, 2011). Dr. Nathwani is a professor and Ontario Research Chair in Public Policy for Sustainable Energy Management at the University of Waterloo. He has authored or co-authored three books, and over 70 reports and technical publications related to energy

and risk management. (His *Globe & Mail* article is superb – well worth a reading.)

Dr. Nathwani also says that “less well known is a contradiction at the heart of green energy technologies – namely, the large environmental footprint associated with resources such as wind, solar and biomass.” He points out that “energy from renewable resources will require anywhere from 100 to 10,000 times the land area compared to conventional resources. Such an expansion of land-use requirements, in relation to the useful unit of energy output, does not rule them out, but they do raise a red flag about ‘green’ assertions.” Strangely, people seem to have a blind spot when it comes to the total land requirement effects of wind energy: it’s not just skyscraper-sized turbines dotted here and there; it’s also roads, substations and huge transmission lines.

From all of the above, you might think that I feel wind energy is bad. I do not think that and it is not necessarily

bad. But there are many bad things about our approach to “green energy,” such as: ignoring or brushing off the very serious negative effects; the absence of serious energy conservation strategies; the single-minded focus on mega-sized industrial wind projects (as opposed to the more sensible and friendlier small scale methods); and what appears to be a pervasive attitude that we must maintain our consumer lifestyle, even if it means that the natural world is ravaged beyond repair.

And then there is the elephant in the room: wind energy will not reduce emissions (key word is “reduce”), one reason perhaps being that energy use is increasing faster than wind energy production, another being that no one appears to have any intention of reducing the use of fossil fuels until they are all gone.

It is hoped that environmentalists and naturalists will have a look at the dark side of wind energy before continuing to blindly board the “wind bandwagon.” That at least might add a bit of balance to the green energy tug-of-war.

**INFRASTRUCTURE INCLUDES SUBSTATIONS AND HUNDREDS OF KILOMETERS OF TRANSMISSION LINES.**

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GREAT HORNED OWLS CONSIDER WEASELS AS PREY AND WILL TAKE ONE IF THE OPPORTUNITY ARISES. LEN PETTITT

## LETTERS TO THE EDITOR

### Coyotes, Foxes and Long-tailed Weasels: the discussion

In the last edition of *Nature Alberta* (Fall 2010), following a “Letter to the Editor” by Dick Dekker, I invited readers to share their thoughts, whether from a professional aspect or through personal experience, on the predator-prey relationship between Coyotes, Foxes and Long-tailed Weasels. Dr Dekker’s letter was in response to a letter by Dawn Dickinson in the Spring 2010 magazine, where she was commenting on a note by Dr Dekker in that same issue. It all started with the Winter 2010 cover story, “Considering Coyotes.” Reader Len Pettitt’s response is to the right.

## Add Great Horned Owls to the Mix!

BY LEN PETTITT (CAMROSE, ALBERTA)

I am a new subscriber to *Nature Alberta* and after reading “Coyotes, Foxes and Long-tailed Weasels” [Fall 2010] thought that I should contribute to the given information. I am not a professional but a long time outdoor person and observer of wildlife.

I believe coyotes and foxes contribute to the demise of some mustelids. However I think another predator, the Great Horned Owl, has quite a lot to do with the down-sizing of the weasel family! I have personally seen more than one Great

Horned Owl with a weasel in its talons. (How often might this happen and not be seen?)

In 2009 around our area there seemed to be a shortage of mice and voles, a food source for both weasels and Great Horned Owls. I photographed a Great Horned Owl holding a recently-taken weasel. As a young teenager some 60 years ago living in Manitoba I had on occasion seen weasels up in trees and don’t know if it was to escape predators or not. So they have been doing this for some time.

Your Editor welcomes any further comments by readers on this whole fascinating subject.  
Please email your thoughts to [wildhavn@memlane.com](mailto:wildhavn@memlane.com).



DEBBIE GODKIN

# Nature Diary: Muskrat

BY DEBBIE AND ALAN GODKIN

*Our first barn was a garage package that we adapted for our horses. We used an old kitchen cupboard as a feeding station for the cats and horses, and for storing a large garbage can that held the oats.*

As I did every morning, I went to fill a pail with oats, but abruptly pulled my hand back out of the can. A muskrat was sitting quietly in the oats. Being that the can was half empty, the muskrat couldn't get back out. I tipped the can onto its side and the muskrat made a quick exit. I thought that was the last I'd see of the little critter, but the next morning it was back in the oats. I had put the lid on the night before, but it was bent up, so I hammered it back into shape.

The next day when I went into the barn, the lid was intact, and there was no muskrat to be seen.

While doing chores I noticed some movement behind the cupboard. It was the muskrat eating oats the horses had spilled. For the next few days the muskrat was content to eat the spilled oats and drink water from the cats' dish. But then one morning upon entering the barn, I spotted the muskrat sitting amongst the barn cats on top of the cupboard. When I approached, it scurried down behind the cupboard, onto the cement floor, and through a hole (which hadn't been there the night before) into the horse stall.

The next morning the muskrat was sitting up with the cats again,

but hurried off into the stall when it saw me. After feeding the horses and the cats, I watched from the doorway to see if the muskrat would return. Sure enough, within a few minutes it emerged through the hole and climbed up on top of the cupboard and joined the cats. It seemed to have acquired a taste for cat food.

Over the next month the muskrat was either waiting with the cats for breakfast when I entered the barn each morning, or eating spilled oats. The muskrat showed up in the barn during a warm spell in February and didn't leave until the spring thaw late in March.

*Like many naturalists, Debbie and Alan Godkin, from Westlock AB, have numerous stories of their experiences with nature – stories they love to share with other naturalists in this "NATURE DIARY" series!*

## ALBERTA ISSUES IN BRIEF

## Science? Bah, Humbug!

Alberta's twenty-four year history of inaction, decline and failed recovery of Woodland Caribou took another downwards lurch when the Alberta government admitted that it would be ignoring the advice of its own scientists to change this charismatic species from threatened to endangered.

"The government's own scientists are sounding the alarm here," says Nigel Douglas, Alberta Wilderness Association (AWA) Conservation Specialist. "So why is it that everything gets dragged through this industry-based politicized process that ends up with nothing being done? The losers are the caribou in the end."

The government's Endangered Species Conservation Committee (ESCC) makes recommendations to the minister of Sustainable Resource Development on the status of Alberta wildlife. The ESCC is a 'stakeholder' committee, including representatives from the Alberta Forest Products Association, Canadian Association of Petroleum Producers and the Western Stockgrowers' Association; Nature Alberta is also on the Committee. As a non-expert committee, it often take scientific advice from its own Scientific Subcommittee. But when the Subcommittee recommended in December 2010 that the plight of Woodland Caribou was so dire that they should be downgraded from threatened to endangered, its advice was ignored. The Alberta government is refusing to publish

the recommendations of the Scientific Subcommittee.

"Despite endless reports and surveys," says Cliff Wallis, AWA President, "nothing meaningful has been done [in the past 24 years] to keep industrial development and motorized access out of caribou habitat. The caribou's disappearance seems assured."

AWA is asking for the Minister to release the Subcommittee documents or it will initiate a request under the Freedom of Information and Privacy Act. "This is a further betrayal by the Minister, the Hon. Mel Knight, and the Deputy Minister of Sustainable Resource Development, Eric McGhan, who as recently as November 2010 promised action on caribou habitat protection to the Alberta Caribou Committee," notes Wallis.

**For more information:**

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(403) 271-1408;

Nigel Douglas, AWA Conservation Specialist: (403) 283-2025

*(From an Alberta Wilderness Association Press Release, Feb 22, 2011)*

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## UPDATE: Land Stewardship Act

The Alberta Land Stewardship Act (Bill 36) generated a huge outcry from all walks of life in Alberta. The Bill effectively gave Cabinet total control of the province's land base and prohibited Albertans from challenging any Government decision without first getting its permission. In response to this revolt against the Bill (and several other similar actions), the Government has announced Bill 10, the Alberta Land Stewardship Amendment Act, which the government claims will clarify the intent of the original legislation.

According to a March 1, 2011 message from Morris Seiferling (the Stewardship Commissioner of the Land Use Secretariat), "Bill 10 will create a review process for people who believe they are directly and adversely affected by a regional plan. It will also require public consultation during planning and that draft regional plans be provided to the Legislature before being approved."

Albertans are encouraged to read Bill 10 and comment on it. One thing that may be a concern is the statement, "for people who believe they are directly and adversely affected by a regional plan." This is a common government tactic used to severely limit criticism and public involvement. Comment to: Christopher.Vandenborn@gov.ab.ca, Morris.Seiferling@gov.ab.ca, and LUF@gov.ab.ca

# The Great Alberta Land Giveaway

On February 3rd, the Alberta government announced that they would give away 84,381 acres of public land to sixteen different rural municipalities. First “Potatogate” – now “the Great Alberta Land Giveaway!”

The amount of land involved in the “Great Giveaway” is about 125 square miles or five times that of Potatogate. As with the potato folly, this potential travesty has already generated widespread anger, condemnation and disbelief from many different sectors across the province. Apparently, some government backbenchers are equally appalled.

Some of the key issues:

- a) Why is this land transfer being announced in advance of the release of the South Saskatchewan River Land Use Framework?
- b) What sort of environmental review – if any – did the Government do to come up with the 35,345 acres it intends to keep?<sup>1</sup>
- c) What input did regional biologists from Alberta Sustainable Resource Development have in the identification of lands to be protected? Was critical at-risk-species habitat considered in these decisions?
- d) Why is the government so intent on getting rid of native prairie, one of the world’s most endangered landscapes?

Giveaways (officially called “Transfers”) have been going on for several years.<sup>2</sup> However, according to Evan Berger, PC Member of the Legislative Assembly, these transfers were halted in 2009 and 2010. Now, according to the Feb 3rd announcement (and ten days after Ed Stelmach announced his resignation), the transfers will speedily continue – unless Albertans again raise their voices and demand a stop to such objectionable decisions.

It should be noted that the Municipalities cannot be blamed;

after all, who wouldn’t accept millions of dollars worth of land for just one dollar? Also, the Municipalities gaining this massive windfall may not sell the land off; they may, for example, protect native prairie, grazing ranchland, wildlife habitat. But that’s not the issue. The issue is that the land is no longer owned by Albertans, and the new owners are free to turn them into potato farms, industrial-sized wind energy facilities, off-road vehicle playgrounds, or any other development.

<sup>1</sup>According to the government press release, 35,345 acres in eleven municipalities “will be retained because of their importance for soil and watershed protection and for the maintenance of biodiversity.” Said SRD Minister Mel Knight: “Our government will keep these sensitive areas as public land. These lands will continue to provide valuable wildlife habitat and grazing and recreation opportunities for Albertans.” Unfortunately, no other information on these “sensitive areas” was forthcoming.

<sup>2</sup>The land being transferred has been labeled by the government as “Tax Recovery Lands”: lands which were once private but have been under provincial management for 70 to 80 years because of tax forfeiture. The government claims that the understanding was always that they would be transferred to the municipalities.

## Charges Laid

Alberta Environment has laid charges against Statoil Canada Ltd. for allegedly contravening parts of its water licence and providing false or misleading information regarding water withdrawals at its in situ facility near Conklin, Alberta. The charges relate to separate incidents in 2008 through 2009 in which water was

improperly diverted from various water bodies for use in plant operations. The first court appearance is set for April 6 in Edmonton.

*From an Alberta Environment Press Release, February 10, 2011*





## Eyes on IBAs

# Beaverhill Lake IBA Site Number 001

BY LISA PRIESTLEY AND CHUCK PRIESTLEY

*“And so Beaverhills Lake has endeared itself to many who have come and gone... So far it has survived both natural and man-made vicissitudes but it will take care and planning to ensure that the migrant birds will still come thronging to its shores as they have done through the centuries.”*

- Robert Lister (The Birds and Birders of Beaverhills Lake. 1979)

Located about 40 km east of Edmonton, Beaverhill Lake is very important during migration for waterfowl, shorebirds, songbirds, and raptors such as Peregrine Falcon and Bald Eagle.<sup>1</sup> This large shallow lake (139 km<sup>2</sup> and 2.3 m depth when water is high) also provides breeding habitat for a variety of species of concern such as Piping Plover, Short-eared Owl, and Sprague's Pipit during the summer.

Due to these attributes, the lake was designated a National Nature Viewpoint by the Canadian Nature Federation in 1981, and a Wetland of International Importance under the Ramsar Convention (1987).

Beaverhill Lake was the first Important Bird Area (IBA) designated in Canada (1997) (Krikun and Holroyd 2001). The lake was selected as an IBA because of

significant congregations of species that use the lake as a staging area during spring and fall migration. During spring migration, high concentrations of Greater White-fronted Geese and Snow Geese

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*Even though species assemblages may change among years, the site clearly remains important for large numbers of birds as water levels fluctuate in and around the lake.*

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have been recorded, with greater than 1% of the global population which qualified their abundance as “globally significant” in the context of IBA designations. Spring concentrations of four species of arctic breeding shorebirds (Pectoral Sandpiper, Black-bellied Plover, Long-billed and Short-billed Dowitcher) consist of greater than 1% of the global population. American Avocets breed at

Beaverhill Lake in nationally significant concentrations (greater than 1% of the national population). Also, an estimated 40,000 to 70,000 ducks use the lake as a staging area and moulting area during spring and fall migration (Coopers and Lybrand 1989). Over 20,000 shorebirds use the lake as a staging area during migration (Saley 1994). During a single day in May 1995, 52,334 shorebirds were recorded. Colonial nesting birds, including American White Pelicans and Double-crested Cormorants, nest on Pelican Island and Dekker Islands when water levels are high. Fairweather (1999) and Dekker (1998) have listed about 291 bird

Beaverhill Bird Observatory coordinates the Alberta Nocturnal Owl Survey. More than 200 volunteers participate in this program each year across the province.

<sup>1</sup>See *Nature Alberta*, Vol 39, No 3, Fall 2009: “Peregrine Catches Hudsonian Godwit”; and “Herring Gull Actively Hunting Ducks”, both articles by Dick Dekker.



**A LEAST FLYCATCHER – ONE OF THE MOST COMMON NESTING BIRDS AT BEAVERHILL NATURAL AREA – SNUGGLES INTO ITS NEST. L & C PRIESTLEY**

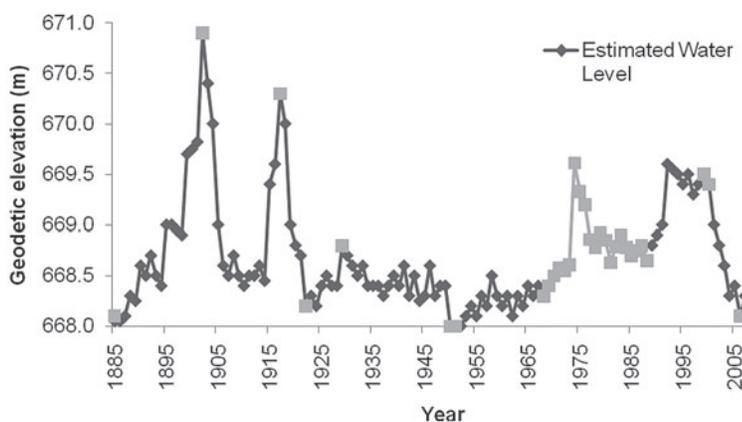
species that have been recorded at Beaverhill Lake either on the lake or in the surrounding area.<sup>2</sup>

Lake levels have fluctuated dramatically over the past century, and recently have been

the subject of much discussion and conjecture.<sup>3</sup> These changes in water level are what make the lake such an important site. During dry years, large mudflats form creating habitat for massive

flocks of migrating shorebirds. When the lake is dry, as has been the case recently, foxtail barley takes over creating large seed banks for small mammals which attract raptors in large concentrations. On 17 April 2006, 191 Short-eared Owls, four Red-tailed Hawks, 25 Northern Harriers, two Rough-legged Hawks, and one Snowy Owl were observed at one time from Francis Point lookout (Priestley et al. 2008). In the summer of 2010, three Short-eared Owls and two Northern Harrier nests were found in a small study area on the south end of the lake (Holroyd, pers. comm.). Even though species assemblages may change among years, the site clearly remains important for large numbers of birds as water levels fluctuate in and around the lake.

**FIGURE 1.** Changes in Beaverhill Lake levels based on Alberta Environment (1968-1986), Lister (1979), the Alberta Lake Atlas online, and personal observations.



<sup>2</sup>See *Nature Alberta*, Vol 40, No 1, Spring 2010 for Dick Dekker's Feature Story "The Ten Last Years of Birding at Beaverhills Lake" summarizing his personal observations from 2000 to 2009.

<sup>3</sup>See the Feature Story, "Will Beaverhills Lake ever regain its former greatness" by Dick Dekker in *Nature Alberta*, Vol 37, No 4, Winter 2008.



**THE YELLOW-RUMPED WARBLER IS ONE OF THE MOST COMMONLY Banded BIRDS AT BEAVERHILL BIRD OBSERVATORY. L & C PRIESTLEY**

Beaverhill Bird Observatory (BBO) is a non-profit charitable organization that was established in 1984. BBO incorporated in 1988, and is the second oldest bird banding station in Canada. The BBO mandate is to promote community interest in birds and the natural world and to conduct studies of migrant and resident birds. In 1987, BBO became

steward of the Beaverhill Lake Natural Area, a protected area on the southeast end of the lake. Today, BBO is also caretaker of Beaverhill Lake IBA. Over the last 25 years, teams of biologists and summer students along with groups of dedicated volunteers have been banding and counting birds in and around the Natural Area. The main focus of BBO's monitoring and research programs has been on obtaining long-term datasets. Initial work started at Beaverhill Lake with a focus on migrating songbirds. Over the years, the scope of programs carried out by BBO have expanded to include provincial, national and international programs for a variety of species including Loggerhead Shrike, Burrowing Owl, Alberta amphibians and North American owls (Priestley 2007).

If you have the opportunity to visit Beaverhill Lake, you really should. This is one of Canada's natural gems. The folks at the BBO would be pleased to welcome you. Please visit [www.beaverhillbirds.com](http://www.beaverhillbirds.com) for details

about timing your visit and to see or download maps and to find out about the latest bird sightings.

#### Acknowledgements

Alberta's Important Bird Areas project would not be possible without generous support from our partners. We really appreciate the growing number of people that have signed up to be caretakers at IBAs. We thank Alberta Conservation Association, Alberta Sport Recreation Parks and Wildlife Foundation, Bird Studies Canada, Nature Canada and TD Friends of the Environment Foundation for their contributions to this program (listed alphabetically). The Important Bird Areas Program is a program of BirdLife International, is co-managed in Canada by Nature Canada and Bird Studies Canada and is coordinated across the country by a growing team of provincial partners, including Nature Alberta.

Sometimes it's spelled "Beaverhill" and other times "Beaverhills" (with an 's' on the end). According to Chuck Priestley: "Technically it should be with an 's' but for some reason that was dropped from the name. All maps [and most other references] now do not use the 's'; the "official" IBA name is also without the 's'." So it would appear that either way could be seen as correct.



**LONG-TIME VOLUNTEER AND BBO BOARD MEMBER AL DEGROOT INSTALLS A NEW DECK AT THE BBO. AL HAS WORKED REALLY HARD FOR MORE THAN TWENTY YEARS! L & C PRIESTLEY**



**KATIE CALON, BBO'S HEAD BANDER, HOLDS YOUNG NORTHERN SAW-WHET OWLS. BBO MONITORS 100 OWL NESTBOXES IN AND AROUND BEAVERHILL LAKE. L & C PRIESTLEY**

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**VISITORS AT THE BBO WATCH HEAD BANDER KATIE CALON TAKING A LEAST FLYCATCHER OUT OF A MIST NET. L & C PRIESTLEY**

# Advertising in *Nature Alberta*

*Nature Alberta* is now accepting a limited number of advertisements for future issues. Ad rates vary from \$35 (business card size) to \$249 (full page), X2 for colour.

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IT IS EASY TO SEE HOW PIKE ARE SOMETIMES CALLED "GATORS"! LUC VIATOUR (WWW.LUCNIX.BE)



# Up Close Naturally: Underwater Predators

BY MARGOT HERVIEUX



NORTHERN PIKE. WIKIPEDIA/USFWS NATIONAL IMAGE LIBRARY

*When most people hear the word predator they think of wolves, eagles or big cats, but there are also predators under the water. In Alberta lakes, that top spot is held by pike and walleye.*

The **Northern Pike** or **Jackfish** (*Esox lucius*) is one of our largest fish, reaching lengths of 1.2 metres (4 feet) and weights of up to 17 kg (37 lbs). They are common throughout most of the province. Their distinctive, narrow shape gives them speed and their rows of sharp teeth make them a force to be reckoned with.



WALLEYE.  
WIKIPEDIA/  
USFWS

Like all fish, Pike continue to grow throughout their lives. They can live for 25 years and that allows them to reach significant size even in our colder waters. Aside from Lake Sturgeon, only

Burbot and Lake Trout get close to this size in Alberta.

Pike hunt by hiding among

the reeds or in weedy patches and then darting out, with surprising speed, to catch their prey. They will take all kinds of fish as well as frogs and mice. Large Pike will also snatch other animals such as young Muskrats and ducklings.

One good time to spot a Pike is during spring spawning. As the ice retreats, the fish gather in shallow, marshy water to find mates and lay their thirty thousand eggs. The eggs are sticky and cling to the vegetation, keeping them out of the mud on the bottom.

The other important predator in our lakes is the **Walleye** (*Stizostedion vitreum*), often called "pickerel" (but see the sidebar). These fish can be recognized by the two fins on their back, the first of which is spiny, and the white patch on their tail fin. They are named for their large, glassy eyes which are well adapted for seeing in dark water.

Walleye can be found scattered throughout Alberta in lakes and rivers where they feed on all kinds of small fish and aquatic insects. Fish watchers can look for Walleye when boating in shallow water on

a hot summer day or by checking rivers from bridge crossings. Though not as big as Pike, Walleye can reach 85 cm (34 in) in length and weigh up to 7kg (15 lbs).

Like Pike, Walleye spawn in the early spring. They move to rocky shoals or gravel bars where the females will lay from twenty- to ninety-thousand eggs. The eggs remain in the gravel for two or three weeks. Silt from erosion or human activity can suffocate eggs during that time.

Pike and Walleye are fascinating fish. Thanks to careful management, both are recovering well from serious over-fishing in the 70s and 80s and we can look forward to them remaining an important part of their watery world.

## Pickerel-Perch-Pike!

Nothing illustrates the value of scientific Latin names like the potential hodge-podge of English names we have for many fish species. Both Pike and Walleye are classic examples. The number of common or colloquial names for Pike is almost endless: from swamp shark to gator to just plain "Jack". Walleye in Alberta, as elsewhere, is often called pickerel when in fact it is a perch. True pickerel are a pike. But there's only one species of pike in Alberta – the Northern Pike. Thus, though we have five species of perch, we have no pickerel perch. Actually, we do have a "pickerel" – which is what a young pike is called. There is a good tongue-twister in there somewhere!



*Margot also writes a column for the Peace Country Sun, archived copies of which are available at [www.peacecountrysun.com](http://www.peacecountrysun.com).*

# Andrew & *The Tyee*

Renowned Calgary writer and journalist Andrew Nikiforuk has become *The Tyee's* first "writer in residence." Andrew will be contributing a regular column to *The Tyee* under the heading of "Energy and Equity."



Andrew is the author of the award-winning book *Tar Sands: Dirty Oil and the Future of a Continent*, a knowledgeable, fact-based, must-read for everyone regardless of whether they are in favour or against the tar sands. His columns in *The Tyee* are straightforward, thoughtful, intelligent and trustworthy.

What does Andrew hope readers will take away from his "Energy and Equity" columns? "I leave that up to readers," he said in an interview with *The Tyee*. "I hope to tell some good stories, profile some interesting people, perhaps cause you to laugh or cry, offer some better insight into human condition and our relationship

to energy, and what we sacrifice sometimes when we make energy the centre of our lives."

*The Tyee* is an independent daily online magazine "dedicated to publishing lively, informative news and views, not dumbed down fluff." Their promise: "At *The Tyee*, you'll find investigative reporting no one else is doing." While based in B.C. with much of their material related to that province, *The Tyee* reports continually on issues in other provinces, including Alberta. Many of their stories – B.C. themed or not – have a relevance to the entire country. The magazine reports on a wide variety of topics, including books, the arts, "Life" and "Mediacheck".



To read *The Tyee* online and/or to subscribe: [www.thetyee.ca](http://www.thetyee.ca).

## Our Apologies

NATURE  
ALBERTA

Due to a printing error, the inside covers of the last edition of the hard copy magazine were in black and white instead of colour. Our sincere apologies. If you are subscribed to the E-version of Nature Alberta, you received full colour.

Note: Because of the lateness of the last edition, the normal "Starry Nights" column was out of date and was replaced with the Feb-April article. Thus, there is no "Starry Nights" in this issue, but it will return with Spring.

## Close to Home: Nature Photography in Alberta



JOHN WARDEN

# On the Wings of Change

BY JOHN WARDEN

*The Merlin launched from the fence along our backyard, a dart-shaped "arrow with eyes" flying straight at our window.*

It was raining hard. She flared her wings just short of the house and perched on the railing of our deck, out of the wind, but not out of the rain.

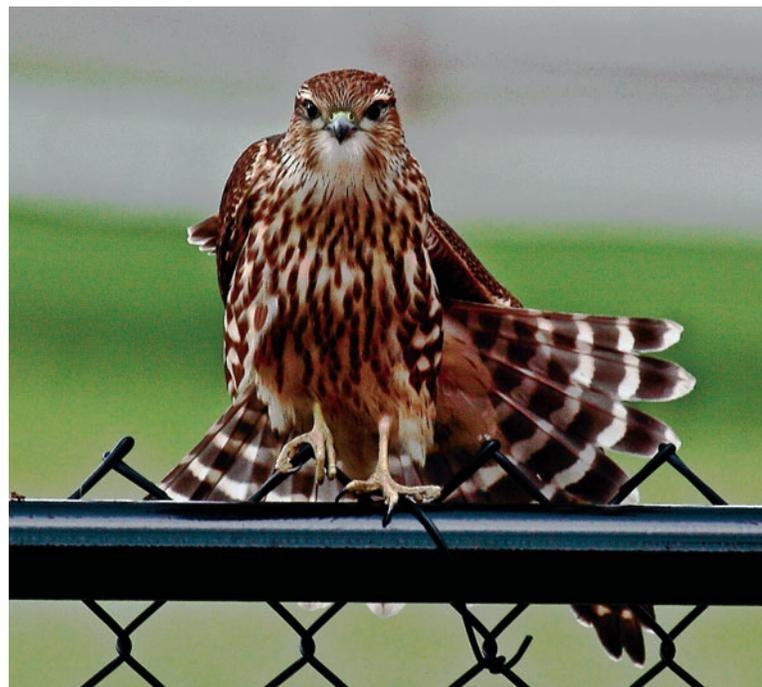
I was flabbergasted. Never before had I seen a Merlin so close. I could see beads of rain running off her beak. She was no more than six feet away, just on the other side of the window from where I was watching. What should I do: enjoy the moment, for surely that's all it would be, or should I run downstairs for my camera? I stayed with the moment and watched her, rain bedraggled, but beautiful. Suddenly, she was alert, on target. She hadn't stopped by for a visit. She had followed a large blue dragonfly out of the rain and now, she attacked. No contest. It was a dragonfly dinner for the Merlin, translucent wings sticking sideways out of her mouth. Oh, my kingdom for a camera!

And so marked the beginning of a transition. The very first bird we saw from the window of our new home was this little female Merlin, the magician of aerial combat, the huntress. She hung around for three days, allowing me to get a couple of nice shots from our back deck. Now that's nature photography "close to home". Then she was gone, on to a new place, like my wife Debra and I, migrating from one home to another.

Our new home is everything we had hoped for and more. It backs onto a couple of small storm water ponds, so there is an openness to our view. We are no longer

hemmed in and overshadowed by other homes. We can see the sky. We can watch the morning sun bring our little ponds to life. We have sunrises and sunsets and oh, that gorgeous golden light just before dusk.

Once the sun is gone, we have the inky blue blackness of night. There is a meandering



JOHN WARDEN



path around the ponds and an observation deck built out over the water. We can stand on the platform and look out over the water, and up at the stars and the moon. We've seen both the harvest moon of September and the hunter's moon of October, hanging low and orange in the evening sky and reflected by the surface of our ponds. I continue to be awed by the wonder of moonlight on water. Somehow it's not something I expect to see. But I look for the opportunity now and when I do see it, it's something special. The soft moonlight speaks of romance, but also of intrigues and creatures in the night.

We moved into our new home in mid August when the plant life was still green, leaves still on the trees and mallards and coots still

on the ponds. But the geese were already starting to gather. On a westward approach to the ponds, the geese fly right by our back deck, almost at eye-level, so close we can hear the wind in their feathers and see the sunlight in their eyes. It's exciting, and it just seems right that we live here, next

to the ponds and under the moon and the stars. It's as if there was a plan out there in nature that we were always supposed to live here and now we do. Perhaps John Denver said it best, "coming home to a place you've never been before"<sup>1</sup>.



The weeks pass and as we settle into our new home, the season is transitioning along with the birds. The ponds are covered now in ice and several feet of snow. But still, there is life. Kids have cleared the snow from the ice and are playing shinny hockey nearly every day. And of course, there are the waxwings.

The mountain ash trees along the path by our ponds are heavy with berries and attract the waxwings of winter. In the cold, quiet, desolate depths of an Edmonton winter the flashing brown and yellow of hundreds of waxwings moving in a single-minded aerial dance is for me, not just a sign of life but a triumph of life over winter. So as the waxwings wheel

and swarm in the icy blue winter sky, can the warming breezes of spring be far behind? Surely it can only be a few more weeks, or...months.

And with spring will come the geese and ducks and swans and maybe even our Merlin. Transitions and migrations, opportunities – arriving on the wings of change.

<sup>1</sup>Rocky Mountain High, John Denver, John Deuschendorf; Mike Taylor



Well-known Medicine Hat photographer Rick Price has a number of his videos on YouTube, but the latest is sure to bring a warm smile to your face. "Wild Babies" is a 4 min, 49 sec slide show of Rick's photos of baby animals: deer, ground squirrels, coyotes, burrowing owls, foxes, bison and many more. Enter "**Wild Babies d50r50p YouTube**", sit back and enjoy a lovely show!

# Support Nature Alberta through a *Birdathon* This May

*Calling all Birdwatchers! Young or mature, skilled or novice!  
Want to have a lot of fun and help birds, nature and Nature  
Alberta at the same time?*

How? DO a BIRDATHON! Get your friends, co-workers, extended family involved in sponsoring you on a fun, enjoyable day of bird watching this May. It's challenging, exhilarating, and – beware – addictive! Birdathoners just can't help coming back for more, year after year!

Nature Alberta requests your support! Use this wonderful past-time and the Baillie Birdathon to provide support to both Bird Studies Canada (BSC) programs and Nature Alberta provincial-level education, conservation and awareness programs.

As BSC states: "You don't need to be an expert about birds; everyone's efforts are important. You can spend part of a day, or a whole day (up to 24 consecutive hours), and check off the species you see on the provided checklist". So plan for an outing in May-perhaps through your participation in a provincial May species count or select any other outing to your special birding area(s) - and then register for the

Baillie Birdathon on-line at [www.bsc-eoc.org/support/birdathon/](http://www.bsc-eoc.org/support/birdathon/).

When registering, in the space provided which states "*I want to direct some of the money I raised to another conservation organization*", designate **Nature Alberta**, 11759 Groat Road Edmonton AB T5M 3K6; Executive Director: Philip Penner. For those already pledging to one of our provincial conservation clubs/organizations or Canadian Migration Monitoring Network sites, please continue that support.

Getting your sponsors can be made easy. The information required will be sent to you on registration. E-mail or provide sponsors with a brochure available on the Baillie Birdathon website, along with your participant name/number. Potential sponsors will find an on-line donation page where they select you and provide their sponsorship amount. The more traditional pledge sheets are also provided, especially for those who wish to sponsor by species.



CONSERVING CANADA'S BIRDS COAST TO COAST

Hey! A wonderful Bobolink Birdathon T-shirt is even available! There are draws for special Young Birdathoner prizes, and all participants get one chance to win most prizes, regardless of amount raised in BIRDATHON, and an additional chance for every \$250 raised.

As stated in the Birdathon kit: "Don't rule out doing your BIRDATHON on a foreign vacation. Many participants do this and we love to hear about their adventures! It's fun to do a BIRDATHON with friends. More eyes and ears certainly find more birds, while sharing the day's experiences increases enjoyment and adds to the memories. Don't feel you need to tally a big bird list or sponsor list to be successful in BIRDATHON. The BIRDATHON motto is: "*Have Fun!*"

Get more information or register online through BSC's web site; you can also download the Birdathon kit: [www.bsc-eoc.org/support/birdathon/](http://www.bsc-eoc.org/support/birdathon/). Register by May 1 for a chance at an Early Bird Draw. And we hope you designate Nature Alberta on your registration form.

Register for the Baillie Birdathon on-line at [www.bsc-eoc.org/support/birdathon/](http://www.bsc-eoc.org/support/birdathon/).

[Nature Alberta invites and encourages readers to check Ryan's blog for many of his fascinating field notes articles. He usually posts a set once per week. <http://akayokaki.blogspot.com>.]

# AKAYO' KAKI A' PAWAAWAHKAA



BY RYAN HEAVY HEAD; SIKOOHKOTOKI, KAINAISSKSAHKOYI

*My Walk through Ecology, Dreams, Natural Education and Experience in Blackfoot Territory.*

Journaling a record of reciprocations between niisto, nikso'kowaiksi, ki kitawahsinnoon...facilitated by an endeavor to progressively engage with niitsi'powahsin, akaitapiitsinikssiistsi, nipaapao'kaanistsi, iyaohkimiipaitapiiyssin, ki niitsitapissskska'takssin.

[Note: The Blackfoot translations are on the following page]

Ryan Heavy Head and his wife Adrienne are caretakers of a Beaver Bundle for the Blood Tribe of southern Alberta. The Beaver Bundle is the most ancient medicine bundle in the Blackfoot tradition. It is the embodiment of a treaty between human beings and those who have lived here far longer - the plants and animals who the original humans agreed to treat as

respected educators, capable of transferring us knowledge of how to live sustainably in the upper Missouri and upper Saskatchewan watersheds. Heavy Head works as the coordinator of Kainai Studies at Red Crow College, on the Blood Reserve, where he teaches field courses in phenology and traditional foods.

## SIX-LEGGED THAW

**January 28, 2011**

12:48. Sspopiikimi - out here by my lonesome this afternoon, to see how things are faring after the full week we've had of warm chinook weather. Walking in, north-pond is still ice-covered, but as per snow only the drifts remain.

13:07. With the ground mostly thawed, I know that it will be

a progressively exciting insect season from here on out. I don't even get far past the bat tree before I find a couple small pieces of wood worth turning over. Neither piece is more than a foot long, but both are home to little families. The first chunk I turn

has a wolf spider egg sac attached to the bottom. These eggs are a very distinct salmon-orange color, protected in a sheath of white silk, two disks glued together at their edges. The second wood I turn, which is sunk a bit deeper in the earth, is home to several minute ground beetles and about half a dozen baby snails

13:32. My next stop is at the Beaver-felled poplars on the extreme end of north-pond. This is always a productive insect site, though never quite as populated as the old planks found here and there on the wet meadows. I set to work turning large branches and pieces of the trunks. Again there are wolf spider eggs, and also a still-cold soil centipede. I encounter a couple small, live spiders - one of them a crab of some sort, the other a shiny little brown-black creature. From the sawdust piles I find, there are either poplar borers or wood ants dug in here. I also see lots of evidence of the voles nesting under these logs, but no food caches or live rodents. I'm surprised to find none of the fuzzy caterpillars hibernating here that were so numerous at this very location last winter

13:57. I finally climb the levee and drop into the north-wood in hopes of locating fresh tracks in the muddy soil. But the ground seems to be absorbing the melt very well, and it's really not damp enough to retain any small mammal impressions, so I cross around by the river and return to the levee-walk. Here,



RYAN HEAVY HEAD

at the extreme end of the forest main, there is a group of eight magpies scouring the shale trail for something. They fly into the forest canopy at my approach, and though I search a patch of the trail myself, I see nothing of interest. I'm presently seated under a tree off the side of the trail, waiting to see if they'll return to the ground and, hopefully, to what it is they're eating

**14:21.** The magpies, of course, never return. I take another shot at figuring out for myself what's so interesting. The only edibles I find are the odd bulberry and some fairly decomposed coyote or raccoon dung. Perhaps the magpies were not searching the trail for any one thing in particular, but it seems odd to me that so many should gather together here if there is no abundant food

**14:50.** I hike through the forest main and out to the wet meadows, where the big bulrush patch is. Joey Blood reported seeing magpies carrying sticks by his house the other day, and I'm curious to see if any out here are building or repairing their nests already. I sit on a log at the edge of the forest and watch for about twenty minutes, but no luck. Then I head down to the *ksisskstakioyis* ["beaver lodge"] to find out whether, by chance, they've broken through the thinning ice yet. There is a spot between their house and their food cache that looks like it might have been opened, but is now iced over, though this could have been from much earlier in the season. If we continue to get these warm periods, I'm sure it won't be long before they have fresh air again. Moving

from there to the subpond, I turn over some more boards. Under one of them I find a very cozy mouse nest, but no food stores. Under a couple of the others, there are clusters of still-cold sidewalk carabid beetles and a few active meadow slugs

**15:20.** The next place I head is to the spring at south-pond. There are two mallards here, but they retreat as soon as I come within view. The kingfisher is also here, and she trills as I pass. The dead pike who got trapped by the ice a couple weeks ago are still floating in the open pool of the spring. I'm surprised that not even the coyotes have waded in to pull them out. The one fish that I'd dragged to shore last week is completely eaten. All that remain are the dangerous jaw bones, set with many rows of shark-like teeth [photo below]. I lift one more small board before climbing back up on the levee to return to the car. Underneath, I find a single beetle larva of unknown species. Somewhere out on the river, I hear the whistle-wing of a goldeneye in flight

**23:40.** All attempts to control the flow that sustains life will meet resistance, and result in damage, injury, and eventual death. But if you engage with the flow so intimately that your needs and its nature feed one another, to the benefit of the whole ecosystem, then you have become flow, in the manner of a beaver.

## BLACKFOOT TRANSLATIONS!

**Sspopiikimi:** Turtle-Waters, my name for an oxbow pond of the Oldman River near Lethbridge that is inhabited by a thick population of painted turtles.

**Ksisskstakioyis:** Beaver-Lodge

**Akayo'kaki A'pawaawahkaa:** Many-Wardings-Off Walks-About – the first part being my Blackfoot name

**Sikoohkotoki:** Black-Rock, the area known also as Lethbridge

**Kainaisksaahkoyi:** Blood-Territory

**Niisto:** Myself

**Nikso'kowaiksi:** My-Relations

**Kitawahsinnoo:** What-Nourishes-Us, otherwise known as Blackfoot Territory

**Niitsi'powahsin:** Original-Language

**Akaitapiitsinikssiistsi:** Stories-Of-The-Ancestors

**Nipaapao'kaanistsi:** My-Dreams

**Iiyaohkimiipaitapiyysin:** Way-Of-Life-Of-Those-Who-Belong-To-The-Water, referring to those who have taken care of Beaver Medicine Bundles

**Niitsitapisskska'takssin:** Blackfoot-Knowledge-Paradigm





## FEATURE ARTICLE

# Cooking

GEORGE HALMAZNA

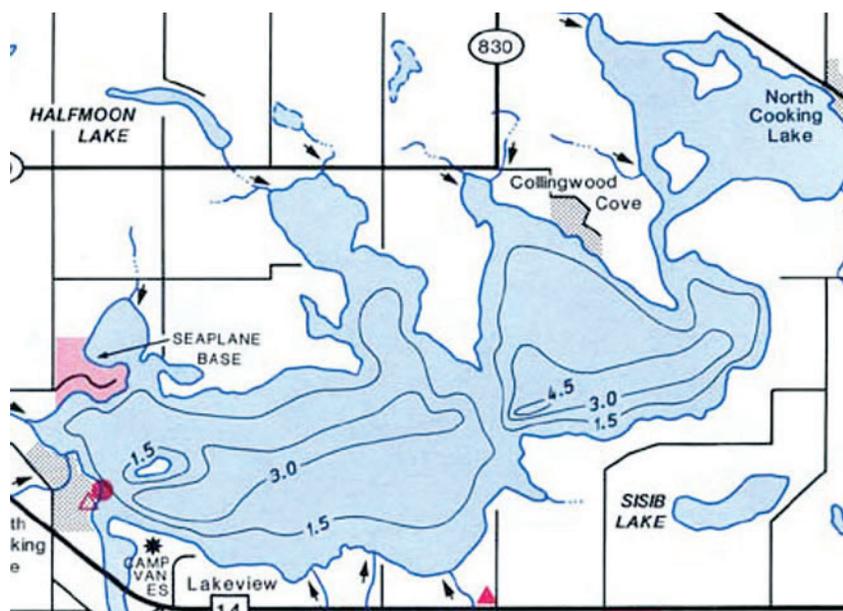
## From Algae to Eagles!

BY DENNIS BARESCO

If you travel 27 km east of Edmonton, you will come upon a large, stretched-out, twisted body of water that, depending on the time of year, may be alive with waterfowl, shorebirds,

invertebrates and plankton. As shallow lakes often are, the waters of Cooking Lake are extremely fertile – providing habitat for everything from algae to eagles.

The Cooking Lake Moraine, with its knob and kettle topography, is an extremely valuable landscape. Located in the Prairie Pothole Region of Canada, an area internationally known for its highly productive wetlands and thus within the boundaries of the North American Waterfowl Management Plan, it is dotted with shallow sloughs, ponds, lakes and bogs. Because of its multiple values, some relatively large areas are protected: Elk Island National Park; the Blackfoot Grazing Reserve; Ministik Game Bird Sanctuary; the North Cooking Lake Natural Area. The Ministik,



**BATHYMETRIC MAP OF COOKING LAKE. EACH LINE REPRESENTS A 1.5 M CHANGE IN WATER DEPTH. FROM: THE AB LAKE MANAGEMENT SOCIETY. VOLUNTEER LAKE MONITORING PROGRAM, COOKING LAKE 2006 REPORT**

# Lake

WIKIPEDIA

Joseph and Oliver Lakes Important Bird Area (IBA), though IBA's are not legally protected, has global significance for congregating waterfowl during the fall migration [See *Nature Alberta*, Vol 39, No 3, Fall 2009, pgs 31-34].

Most recently, a group of organizations brought another 1,350 acres into the protective fold: the Golden Ranches. The purchase of the Golden Ranches is a tremendous conservation opportunity which was greatly assisted by a large fine to Syncrude



**CYCLOPS SPP, A COPEPOD, CARRIES ITS EGGS ON THE OUTSIDE OF ITS BODY. COPEPODS ARE THE MOST NUMEROUS ANIMAL IN THE WORLD. IAN GARDINER**

for the duck deaths in a tailing pond, the “creative sentencing” initiative and the wisdom of an Alberta provincial court judge.

Considering that a considerable portion of the Cooking Lake Moraine has been cultivated for agriculture and that country residential subdivisions have taken over a large area, protecting continuous tracts of habitat is very sensible at this point – for wildlife and conservation, yes; but also for human quality of life, recreation, ecological goods and services and just plain aesthetics and enjoyment.

As Dick Dekker writes, bird watching at Cooking Lake is a wonderful and exciting recreation for naturalists. Both shorebirds and waterfowl make good use of the lake for breeding and for moulting, but especially during migration. Water-associated birds bring the birds of prey: Bald Eagles, Peregrine Falcons, gulls, hawks.

The food chain, though, starts microscopically with phytoplankton: Diatoms (Bacillariophyta – a class of unicellular algae) early in the season, progressing to explosive algal blooms of blue-green algae and green algae as the water temperature rises in mid-summer to around 20°C. Copepods (small, aquatic crustaceans) and other zooplankton, along with massive numbers of Chironomids (midges, often just called “lake flies”) plus other invertebrates results in the blessed fertility of Cooking Lake.

Of course, as the water levels rise and fall, sometimes dramatically, so does the variety of wildlife. Nevertheless, Cooking Lake remains a site that naturalists should try to visit at least once, if not often.

## An odd name, Cooking Lake?

For the Cree, who camped there, it was perfectly logical to call the lake *opi-mi-now-wa-sioo* – “a cooking place”.

# The Golden Opportunity of Golden Ranches

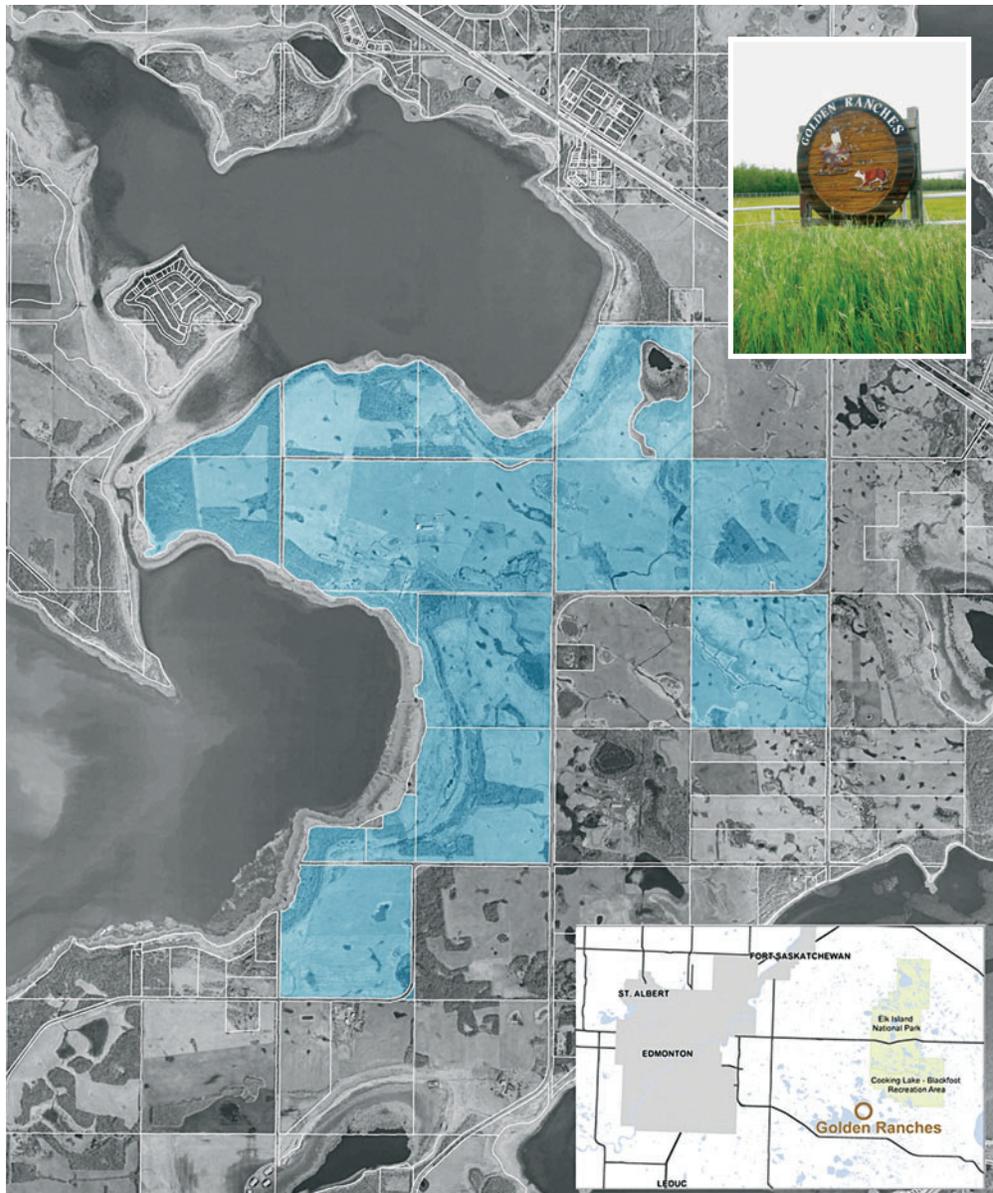
BY DENNIS BARESCO

*The Golden Ranches – a 1,640 acre Alberta wetland and ecological gem representing a golden opportunity for conservation, education and compatible recreation!*

Located on the shores of Cooking Lake and North Cooking Lake and within the Cooking Lake Moraine Natural Area, Golden Ranches is internationally significant as one of the stopover points for migrating waterfowl and shorebirds, habitat for many plants and a vital link in a 377 sq km conservation corridor. With eight kilometers of shoreline, an upland riparian area, grassland and mature forest, and a largely intact landscape for wildlife, it is small wonder that the potential for its conservation has generated so much excitement.

The ecological protection of the Golden Ranches began with the purchase of 136.5 acres in August 2009. In the eighteen months since then, over \$7.5 million worth of land has been acquired to increase the acreage to 1,350 acres, with the ultimate goal of conserving the entire 1,640-acre (664-hectare) ranch.

The realization of this opportunity took great effort by a committed group of organizations along with the very willing cooperation of a landowner dedicated to the conservation of the entire ranch. Seven organizations worked together to bring about the conservation of Golden Ranches: the Alberta Conservation



**GOLDEN RANCHES PROPERTY.** ALBERTA CONSERVATION ASSOCIATION

Association (ACA), Alberta Fish & Game Association (AFGA), Ducks Unlimited Canada, Nature Conservancy of Canada (NCC), Edmonton and Area Land Trust, Beaverhill Initiative and the County of Strathcona. Suncor Energy provided early endorsement and financial support.

“It’s not that often that a conservation opportunity unites seven organizations. For there to be so much common ground there has to be something special about the place,” explains AFGA’s Brad Fenson. “It is located right within key areas already designated and ties everything together so well.”

Indeed, though located only 27 km east of Edmonton, the property is an essential ecological link to Elk Island National Park and Blackfoot Grazing Reserve to the north, and Ministik Bird Sanctuary to the south. It also lies within the North American Wetlands Conservation Act targeted area as important habitat for migrating and nesting waterfowl.

“It’s a challenging, exciting exercise in open communication among the partners and the willingness to try something new,” says NCC’s Juanna Thompson. “For a project of this magnitude, we need to take a creative, outside the box approach to ensure everyone’s priorities and goals are met. But all the partners share the same essential conservation objective: to protect this prize piece of Alberta’s wetlands.”

#### **ASSISTANCE FROM CREATIVE SENTENCING**

A very unfortunate event led to an opportunity to secure the funds necessary to fulfill the purchase of the property. In a tremendously important decision by an Alberta Court, and as part of the “creative sentence” for the duck deaths in a Syncrude toxic tailing pond, \$900,000 of Syncrude’s fine was awarded to the consortium of groups for key wetland conservation. “The creative sentencing penalty,” said Todd Zimmerling, President and CEO of ACA, “allows Alberta Conservation Association and our

conservation partners to conserve and restore wetland habitat in an area where development is a threat to wetlands. My hope is that this case sets a precedent; where there is a significant value attached to environmental violations and that the penalties are used to mitigate impacts by applying them to the natural resource that was damaged.”

With the ranch so close to heavily-populated Edmonton, Sherwood Park and area, the opportunities are many for showing conservation at work amidst the surrounding development. As ACA’s Conservation magazine states: “The site will be unique in that it will support a broad range of low impact visitor activities without the limited access and designated use restrictions of neighbouring protected areas. This low impact, minimal management approach will also help conserve the habitat in its most natural state.” The project partners will be drawing up a Property Management Plan to ensure meaningful stewardship and management of the area.

Bird watching, wildlife viewing, hunting, hiking, education field trips, absorbing nature, partnerships in conservation, coexistence with other sectors, committed people and groups...Golden Ranches, the golden opportunity and experience!

The information in the above article and the quotes are from ACA’s Conservation Magazine (Spring/Summer 2009, Vol 13; and Fall/Winter 2010, Vol 15), and from the NCC website.

#### **For more information on Golden Ranches:**

Visit: [www.ab-conservation.com](http://www.ab-conservation.com)

Contact: Brad Fenson (AFGA): 780-437-2342.

Contact: Lisa Monsees (Communications Manager, ACA): 780-410-1994

Contact: Nature Conservancy of Canada: 403-262-1253; 1-877-262-1253



# Birding highlights at Cooking Lake in 2009 and 2010

BY DR. DICK DEKKER

*It is ironic that a decade of drought which wiped Beaverhills Lake totally off the map has led to greatly improved opportunities for birdwatching at Cooking Lake.*

In past years, few Edmonton birders checked out Cooking Lake, although it is conveniently located within view of highway #14 and on the way to Beaverhills Lake. I only stopped off at Cooking Lake during freeze-up time when the last of the ducks crowded together in a few waterholes. Most of them were probably cripples, victims of the shooting season or lead poisoning. One or more **Bald Eagles** could usually be seen standing on the ice nearby, and with patience there was a chance to watch them trying to capture one of the splashing and diving ducks. However, during spring and summer I seldom visited Cooking Lake because a wide belt of bulrush and cattails obstructed the view of the water, and shorebirds were scarce due to the absence of mudflat habitat.

My very last day trip to Beaverhills Lake, after 45 years of frequent visits every spring and fall, was May 16, 2009 (See: "The Ten Last Years of Birding at Beaverhills Lake." *Nature Alberta*, Spring 2010). After that pivotal date, when the remnant pool of shallows had all but completely

dried up, I switched over to Cooking Lake. In 2009, I made a total of 16 visits: two each per month in May, June, July, August, and October, and six visits in September. Here too, the water levels had been dropping, leaving vast mudflats, but opening up the shoreline for easy access. At each visit I walked a 5 km stretch of the southeast shore, returning the same way. Sadly, most of the soft littoral zone was chewed up by ATVs, the modern-day curse of the countryside. But, in pleasant contrast to Beaverhills Lake, there are no cattle grazing on the south and east shores of Cooking Lake.

## SOME OF THE BIRDING HIGHLIGHTS OF 2009

### May 25, 2009

A great day, sunny with light winds and a high of 21 C. Unevenly spread along the shoreline, there were several thousands of migratory

**sandpipers**, predominantly Semipalmated, with about 5% other species, including Baird's, White-rumped, and Stilts. In addition, I counted about 80 Black-bellied Plovers and 3 **Red Knots**. Far out on the lake, the surface was dotted with **Red-necked Phalaropes**. They often flew up in dense formations, alarmed by **Peregrine Falcons**. Once, there were two falcons simultaneously swooping down in pursuit of prey. One of them succeeded in making a catch and carried it along inland.

In early evening, when I sat down on a stony point littered with soda-encrusted boulders, at least 27 **Sabine's Gulls** flew by. Some of these pretty gulls alighted on the water, and my telescope revealed the diagnostic yellow-tipped bill. Back home, I e-mailed this rare sighting to several local birders. A few days later, when Gerald Romanchuk visited the

GERALD ROMANCHUK





**THE SILHOUETTE OF A PEREGRINE FALCON IN FLIGHT IS AN IDEAL VISION OF AERODYNAMIC BEAUTY!** GERALD ROMANCHUK

lake, he failed to see Sabine's Gulls, but recorded an even rarer bird: a **Snowy Plover**. After he alerted his birding contacts, the little plover was subsequently located by a number of other people. Prior to that day, Gerald had several times checked out a shallow bay near the Cooking Lake airport and seen a good selection of waders as well as one or two Peregrines on most visits.

**May 28, 2009.**

There were not as many sandpipers as three days ago and they were spottily distributed. However, along one kilometre of muddy east shore, at an average of one bird per linear metre, I count-estimated 1000 peeps [a generic, group term for several species of small shorebirds]. In addition, I saw at least 200 sandpipers along the next kilometre. The majority were

again Semipalmated, with roughly 10% Sanderlings as well as a few Least and Baird's, and a single Stilt Sandpiper. Gulls seemed less numerous than before with the majority being Franklin's and Ring-bills. Countless phalaropes were swimming far out on the lake, but I saw no sign of hunting falcons today. Among the waterfowl were quite a few **Eared Grebes** and **Buffleheads**.

**June and July, 2009**

On June 4, migrant shorebirds were gone except for two small flocks of peeps. As to the locally breeding waders, Killdeer seemed scarce but **Avocets** were common: on June 26, a colony of about 30 included at least one large chick, and on July 8, I counted six juveniles. The highlight of June 26 was a **Piping Plover**.

**A MIXED FLOCK OF AVOCETS, SHOREBIRDS, BLACK-BELLIED PLOVERS AND ONE REDHEAD.**

BRIAN GENEREUX





GERALD ROMANCHUK

Its alarm behaviour betrayed that it might be nesting. On July 10, there were two protesting adults, and on July 28, I saw two nearly full-grown chicks scurrying about with a parent. On the same date, in the shallows around a stony islet, I counted approximately 400 Avocets, 50 Marbled Godwits, and 80 **Hudsonian Godwits**. Other migration arrivals on their way back from northern breeding

grounds included a scattering of Lesser Yellowlegs, Black-bellied Plovers, and a few small flocks of peeps. After a warm week, the shallow waters had receded farther out and the stench of rotting algae was overwhelming.

#### **August, 2009**

The shoreline was packed with thousands of loafing ducks. Fearful of people with or without shotguns, all waterfowl flushed with a roar of wings well ahead of my approach. Several hundred Lesser Yellowlegs were less jumpy. Here and there, I walked by a couple of foraging Greater Yellowlegs, Marbled Godwits, and Willets. At one location, there were dozens of Long-billed Dowitchers and 24

**Hudsonian Godwits**. Sandpipers were generally scarce. Those close enough for identification turned out to be Pectorals and Semipalmated, with the odd Baird's or Least, and a single Stilt. Scanning the deeper water well off-shore through binoculars, I discovered hundreds if not thousands of **Red-necked Phalaropes**. Gulls were also numerous: mostly Franklin's, Bonaparte's, and Ring-billed, with the odd Herring Gull.

#### **September, 2009**

On Sept 6, several flocks of **White-fronted Geese** passed by, totalling about 800 birds, and dozens of **Water Pipits** twittered along the shore. The highlight of the month was a **Parasitic Jaeger**. Scanning the lake I had picked it up far away. When it went down on the water, I kept it in focus of the binoculars.

**BOTH LESSER AND GREATER (PICTURED) YELLOWLEGS CAN BE SEEN DURING MIGRATION AT COOKING LAKE. BRIAN GENEREUX**





**BLACK-BELLIED PLOVERS.** GERALD ROMANCHUK

Some ten minutes later, it flew up again and approached closely to pursue and harass a Ring-billed Gull, giving me a perfect view of the jaeger's diagnostic tail. Shorebirds became progressively scarcer but still included a fair variety. Apart from a few peeps, I came across 30 **Sanderlings** and 12 Black-bellied Plovers, as well as some species I had not recorded before at this lake, such as one Golden Plover, one **Ruddy Turnstone**, and two **Buff-breasted Sandpipers**. Avocets remained locally common until the end of the month, with 300 still present on October 1. On the 17th, my last visit of the year, the only waterbirds seen were ducks.

## BIRDING HIGHLIGHTS OF 2010

### Spring 2010

Compared to the previous year, shorebird migrations in April

and May were a disappointment. Based on my long experience at Beaverhills Lake, huge differences may occur from year to year, perhaps depending on continental weather patterns, which may force migrants to bypass Alberta and travel through Saskatchewan instead. Local weather was generally cold and windy. There was no snow melt run-off and lake levels were about as low as in the fall of 2009, despite several good spring rains.

My first visit of April 23 seemed promising. Walking the same stretch of south shore as last year, I saw about 50 each of Avocets and Lesser Yellowlegs in addition to one Hudsonian Godwit and one Killdeer. The surprise was two **Black-necked Stilts**, my first sighting of this species at Cooking Lake. Three days later, the stilts were gone and

the number of yellowlegs was reduced to three. But the Avocets had doubled their number and I counted 6 **Hudsonian Godwits**.

Between May 1 and May 26, I visited the lake on ten days, usually in the afternoon. During a warm spell in the second week, millions of **chironomids** (lake flies) rose like a smoke screen over the shore. Their larvae (blood worms) provided the shorebirds with plenty of food, and the sky was full of screaming Franklin's Gulls hawking the midges.

On May 10, there were about 80 **dowitchers** and the odd Willet probing the shallows. The first small flocks of peeps showed up on May 14, when the weather turned very cold. In ensuing



**A GULL TWISTS  
TO NAB A MIDGE.**  
GERALD ROMANCHUK

## COOKING LAKE WATER LEVELS AND ANNUAL PRECIPITATION

By mid September 2010, it had already become evident that this year was going to be a fairly wet one. At the Edmonton International Airport, the accumulated precipitation had already surpassed the 30-year mean of 450 mm. On December 31, the Edmonton Journal reported that the year's total ended up at 511 mm. Unfortunately, despite frequent rains between April and August, Cooking Lake went down and down. In the spring, I had placed a marker stone at the water line. By mid September, the lake level had dropped about 20 cm. This confirms something I learned at Beaverhills Lake: summer evaporation greatly exceeds rain fall. *For this reason, it is vitally important that inflowing streams should not be dammed.*

The remainder of autumn was quite dry and the mudflats began to widen alarmingly. Kilometres from shore, as viewed through the binoculars, Avocets and gulls could be seen standing in water that did not come up to their bellies. What conditions will be like this coming spring remains to be seen. As of late February 2011, the city of Edmonton has received its fair share of snow. All of it and more is badly needed to bring Cooking Lake back up to what it was twenty or thirty years ago. Hopefully, we are due for a big spring run-off. By comparison, in 2010 southern Alberta and parts of Saskatchewan and Manitoba have been hit hard by spring and summer floods. Giving the cyclic nature of the local climate, one of these years it is central Alberta's turn.

days, the largest flocks I saw contained no more than one or two hundred birds, mostly **Semipalmated Sandpipers** and a few Baird's. Stilt Sandpipers occurred in similarly modest numbers. On May 17, checking out the bay near the airport, Gerald Romanchuk reported the longest list of species so far, including one each of Whimbrel, Black-bellied Plover, Red Knot, and Sanderling.

Wind direction appeared to play a major role in concentrating the shorebirds. On May 19 and 22, with cold northwesterlies blowing, I saw no sandpipers at all along my 5 km walk, but the upwind airport bay contained about 200 Stilt Sandpipers and smaller peeps, as well as 30 Black-bellied Plovers, 2 Red Knots, and 1 Turnstone. After a day of rain, the temperature dropped to just above freezing. Hundreds if not thousands of **swallows** and **Purple Martins** were cruising low over the lake, picking up insects from the surface. By contrast, on May 24 and 26 when the wind blew strongly from the southeast, I saw not a single migrant shorebird in the airport bay, but there were several hundred sandpipers and about 30 plovers on the east side of the lake. **Red-necked Phalaropes** were similarly affected by wind direction. Although they never reached the very large aggregations of the previous spring, between May 16 and 26 a few flocks could be seen on the water well off-shore.

*Dick Dekker, Ph.D., is a Wildlife Ecologist living in Edmonton AB*

### **Summer and Fall, 2010.**

Walking my familiar route up the southeast shore and back the same way, I visited the lake on 12 dates: two in June, three in July, two in August, and five in September. In June there were thousands of loafing ducks, gun-shy as usual, and flushing with a roar of wings a long way ahead of my approach. Billions of lake flies provided a feast for thousands of Franklin's Gulls. But except for the odd Killdeer and Spotted Sandpiper, I saw no evidence of nesting shorebirds. Up to one hundred Avocets were just idling. Their numbers varied over summer, until they suddenly increased to several thousand on September 23.

Shorebird migration numbers were below last year. Dowitchers, Pectorals, and Sanderling were spread widely but never numerous. The best day was August 26, with some 300 Lesser Yellowlegs, 200 Pectorals, and the odd Semipalmated, Least, and Baird's Sandpipers, in addition to three Ruddy Turnstones. After the frosty nights of mid September, shorebird numbers were even scarcer, with here and there a few dozen Dowitchers and the odd small flock of peeps. One or two Golden Plovers hung around with a hundred or so **Black-bellied Plovers** until well into October.



**BLACK-BELLIED PLOVERS.** GERALD ROMANCHUK

Being a falcon aficionado, my highlight of the fall was seeing an adult male **Peregrine** climb high over the lake to intercept a **Magpie**. Pursuing it on a downward course back to land, the falcon had time for three or four swoops before the dodging target dropped into the bushes. This is the first time ever that I have seen a Peregrine hunt the wily Magpie.

### **SHORELINE PLANT SUCCESSION**

In a cursory manner, while walking the shores, I monitored the changes in vegetation. After the disappearance of bulrushes and cattails, the former lake bottom went through the same stages as I had noted during the drying phase of Beaverhills Lake (See the article in *Nature Alberta*, Spring 2010). In spots, the earliest colonizers were Marsh Ragwort, soon to be replaced by clusters of Multi-flowered Asters and Goose Foot. Dependent on soil conditions and moisture, vast fields of Foxtail Barley began to dominate, until they too were forced to give way to more permanent grasses and forbs. This coming spring, it will be interesting to see how far the waters will rise and flood the shores. The higher the better to recover from a decades-long drought. Drowned and rotting plant detritus will become a nutritional bonanza for billions of blood worms, hatching into swarms of lake flies, to the despair of the hiker, but the benefit of the lake's avian inhabitants.

# Young Peregrines learning their trade at Cooking Lake

BY DR DICK DEKKER

*During my long walks along the shores of Cooking Lake, spotting a hunting Peregrine always made my day.*

September 29, 2009, was most interesting with more than a dozen sightings. All falcons that came close enough for me to see plumage details proved to be young of the year, as determined by their brown backs and streaked bellies. Over a two-hour period in late afternoon, a smallish male Peregrine provided a fascinating impression of the problems immature falcons encounter in learning their trade.

From his resting place on a shoreline stone, he made several fast sorties over the lake to meet flying ducks that promptly dropped out of the way. After several frustrated attempts, he came back at great speed low over the water, passing by at very close range. In the next split-second he overtook a small flock of Northern Shovelers and may have actually hit and wounded

one before it splashed down. Circling back, the falcon began a long series of swoops at the swimming target. At each close pass, the duck submerged, kicking up a spray of water. Two or three large gulls eagerly approached. One of them descended by the duck and started to stab and pull it until it stopped moving. Meanwhile, the falcon, claws dangling, tried again and again to retrieve his prey. He twice landed on a shoreline stone for a brief rest, presently resuming his attempts. The drama ended with the arrival of a Bald Eagle, which picked up the floating carcass without stopping.

The Peregrine retreated to a perch some distance away. Sitting down on a boulder, I kept him in the binoculars. After fifteen minutes or so, he again headed out over the lake. Accelerating to great speed, he swooped at ducks rising from the shallows, but they at once dropped back out of harm's way. Suddenly, the falcon climbed to overtake a high-flying gull and seized it from behind. Holding on, he fluttered steeply down, but he could not carry his catch and was forced to release the gull just above the water. Departing at once with furious wingbeats, the falcon gained altitude until he descended far away towards



the opposite shore, vanishing from view. Such long distance attacks are typical of experienced Peregrines.

May 26, my last spring day of 2010, was quite memorable as well. With a cool east wind blowing, the wide expanse of water at the terminus of my walking route contained several thousands of phalaropes, far and near. When a flock flushed from the surface, I aimed the binoculars just in time to see them overtaken by an adult Peregrine,



A PEREGRINE SOARS OVER A FLOCK OF NORTHERN SHOVELERS. GERALD ROMANCHUK



**A GREATER YELLOWLEGS IN AN ALERT POSE. DUCKS AND SHOREBIRDS, EVEN THE LARGER ONES, MUST BE CONSTANTLY ON GUARD FOR HUNTERS LIKE PEREGRINES AND EAGLES. THAT IS ONE OF THE ADVANTAGES OF FLOCKS: SAFETY IN NUMBERS.** BRIAN GENEUX

which seized its prey at once and carried it back to shore. Later that afternoon, another falcon, a dark immature, launched half a dozen attacks on the phalaropes far out over the water, stooping down from various angles but each time missing the target. Giving up, the falcon flew away and soared, drifting downwind over the lake and dwindling to a tiny speck in

the glasses. Eventually, after many minutes, it came back upwind, its wings set and passing high overhead like a black trident. I was hoping that it would make its next attack in good view, but it flew on, gradually descending and boosting its speed with a burst of wingbeats until it dropped out of sight far away.

For exciting, detailed descriptions on how peregrines hunt – and how their prey avoids being caught – there is no better book than Dick Dekker's *Hunting Tactics of Peregrines and Other Falcons* (Hancock House Publishers, Surrey, B.C.). Illustrated with photos and paintings, this excellent book is available from the Nature Alberta Bookstore:  
[www.naturealberta.ca](http://www.naturealberta.ca) (secure website).

To read Lisa Priestley's review of *Hunting Tactics of Peregrines and Other Falcons*, see Nature Alberta, Vol 40, No 2, Summer 2010.

## Ponderables

It is far better to grasp the Universe as it really is than to persist in delusion, however satisfying and reassuring.

- CARL SAGAN

# First Hand: Owl Irruption!

BY GRASSLANDS NATURALISTS

*One of Medicine Hat's most exciting birding events of this winter has been a one-week irruption of owls just south of the city.*

The first report came from Rob Gardner when he observed an astounding 6 Short-eared Owls all at one time on January 18 along the Black and White Trail near the junction of County Road 114. These birds stayed in the vicinity for approximately the next week.

Phil Horch saw a single bird on January 22 in the same area and then Mark Schiebelbein, who lives in that area, saw both Short-eared Owls and Long-eared Owls together, hunting. He even took a wonderful photo of one of the Long-Eared Owls (see the inside back cover). On January 23, Rob and Corlaine Gardner observed three more Short-Eared Owls south of Seven Persons and were able to get photos of one of them.

It seems that the owls had good mouse-hunting in these areas at least for a short time. By the beginning of February, they appeared to have moved on to other hunting grounds.

From "Exciting Sightings" by Phil Horch, Sagebrush Chronicle, February 2011

If you have a first-hand experience with nature, send it in and share it with other naturalists. After all – there are 8 million stories in the Nature City. Yours...could be one of them.



**A LATE JANUARY 2011 SHORT-EARED OWL PUTS ON A DISPLAY!**

CORLAINE GARDNER





**HONEYBEE  
HONEYCOMB  
WITH EGGS AND  
LARVAE.** WIKIPEDIA/  
WAUGSBERG

# Alberta Honey: “Bee” Sure

*In 2010, Alberta beekeepers produced about 12,700 tonnes of honey, according to an AB Government website – definitely enough for all of us!*

Buying pure, fresh, Alberta honey is a no-brainer, but as it turns out, there is another reason to make sure the honey you purchase is Alberta honey: to fight crime and keep from poisoning yourself.

It may surprise many people to learn that China supplies most of the world’s honey. However, it is likely no surprise to find that Chinese beekeepers “are notorious for keeping their bees healthy with antibiotics banned in North America because they seep into honey and contaminate it; packers there learn to mask the acrid notes of poor quality product by mixing in sugar or corn-based syrups to fake good taste” (*Globe & Mail*, Thurs Jan 5, 2011). Lead and dilution with water are also problems – plus, China has been accused of illegally dumping

honey into the U.S. and Canada at below production costs, making it impossible for our beekeepers to compete.

The easy solution is high tariffs or to ban honey from China, as Europe has done. However, the Chinese honey criminal cartel, in conspiracy with brokers and corporations from Germany and elsewhere, get around that through fraud, forgery, shell companies, false labeling – you name it, they do it – by laundering honey through countries like India (the EU has banned honey from there as well), Indonesia, Malaysia, Mongolia, Philippines, Russia, Taiwan, Singapore, South Korea, and Thailand (some of which are claiming to export honey, even though they do not have a honey industry!).

The problem is huge – “part of the largest food fraud in U.S. history”, according to the *Globe & Mail* story – and increasing. It could lead to the collapse of the North American honey industry, which means huge problems for agricultural products (which we all eat) dependent on pollination.

Tough regulations, rigorous monitoring and strong



**BALLARD APIARIES HONEY, FROM ALBERTA’S PRISTINE PEACE RIVER: JUST ONE OF MANY LOCAL HONEY PRODUCERS.**



WIKIPEDIA/YVAN LEDUC

enforcement would be the best solutions, but that could take the U.S. years (Canada, apparently, doesn't even admit to a problem!).

There is not much we can do about honey added to prepared foods (other than writing companies asking them not to use any honey from outside North America), but we can make sure that any pure honey we buy is Canadian – preferably Alberta or Saskatchewan.

For more information, do your own Google search; there are many sites that address the issue.

The full story (from which the article above is gleaned) is well worth reading; the *Globe & Mail*: “Honey laundering: The sour side

of nature's golden sweetener.” by Jessica Leeder; Thursday, January 5, 2011. For an in-depth analysis, read the book, *The Honey Trail*, by Grace Pundy.

## Ponderables

The good thing about science is that it's true whether you believe in it or not.

- NEIL DEGRASSE TYSON

*Lorne Fitch is an esteemed Professional Biologist, Adjunct Professor with the University of Calgary and a retired Alberta Fish and Wildlife Biologist. He is a well-known speaker, writer and photographer, living in Lethbridge AB. "Noah and the Fish" is the first in a series of articles by Lorne.*



# Noah and the Fish

## A Lesson for our Time

BY LORNE FITCH, P. BIOL.

*Occasionally, when it rains excessively, I think of the reported biblical flood and the first major biodiversity conservation initiative.*

I speak, of course, of Noah's efforts recorded in Genesis, to collect a minimum of two of everything and save them from that apocalyptic, spiritually cleansing flood.

What concerns me about this apocryphal tale is the apparent biodiversity bigotry, if not

rampant species racism of the first conservation effort. Noah took "clean beasts, and beasts not so clean, and of fowls and of everything that creepeth upon the earth". The instructions were specific to "everything on the dry land in whose nostrils was the

breath of life". God's goal was pretty clear, "Every living substance that I have made will I destroy from off the face of the earth". In summary, this was to be a clean sweep of his creation. Anything missing on the gang plank to the ark, you might ask?

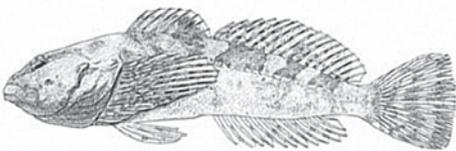
There is stunning silence in this biblical tale on the subject of fish and other aquatic creatures. Similarly there is no reference to plants, except for the olive leaf brought back eventually by a dove. Presumably a 150 day period of inundation would have been enough to do in most plants. That an olive tree survived extended flooding is miracle in its own rite. The bible is mute on the effect of the flood duration on fish, but it seems axiomatic they survived, maybe even prospered. Maybe fish were originally revered as righteous creatures, not requiring divine protection from the cleansing flood. If that were true, the ancient perspective and respect has been lost. But, fish and plants don't "creep", as in the original instructions, and so it seems to me they were overlooked. This is the condition that persists into modern times.



NOAH'S ARK BY EDWARD HICKS, 1846.

Biodiversity conservation has smacked of the Noah syndrome ever since, largely ignoring aquatic creatures and plants. Because of this, species in these groups are the most critically imperiled provincially, nationally and globally. Noah wasn't an ecologist; he was a carpenter, so it really isn't his fault. Noah didn't know, but that first conservation effort set the stage for others failing to understand and implement initiatives to maintain all biodiversity. Not just the critters that run, jump, fly and breathe air on dry land – the charismatic megafauna – but everything.

The ones that swim, take root and extract oxygen in other ways need the same attention and publicity Noah gave the terrestrial animals. In Alberta we have imperiled populations of Bull Trout and Westslope Cutthroat Trout. Over most of their range the classification of the current status of these species might be termed “extinguished”. To some extent people might recognize the term “trout”. The reality is that most people couldn't tell a trout from a fish stick, let alone understand the relevance of the St. Mary Sculpin, another fish species in short supply. Most people are woefully ignorant of fish species - their presence, biology, importance, distribution and status.



**ST MARY'S SCULPIN.** DFO-MPO.GC.CA

Grizzly Bears have hogged the endangered species spotlight, with good reason. But when

you mention Tiny Cryptanthe the response is “tiny what?” Porsild's Bryum will evoke a wrinkled brow and Western Spiderwort will have the listener's eyes glaze over. Short of the few botanists in this country, many of us couldn't distinguish these plants from pansies, or celery.

Ironically, we are more conversant with introduced garden-variety plants than the native ones that define our landscapes. About 12,000 years of Rough Fescue growth gave us the black soils that sparked the development of the province and still sustain agriculture. Only belatedly, after most of it disappeared did we confer upon it the designation of “Provincial” grass. Even that produced some inspired snickering, mostly from the benches in the Alberta legislature, about other “grass”, the non-native one that is typically inhaled. Sadly, most of the species in dire straits are the uncharismatic microfauna, or flora; too small, too unseen, too cryptic or too localized to be recognized and appreciated.

This is especially true for fish, living largely out of our sight in a world alien to us terrestrial creatures. It is just beginning to dawn on us that fish are important indicators of the health of our world. A world, I might add, that is 70% water – so much so we should have called it “Aqua” not “Earth”. As earthlings, living on dry land, we have given short shrift to our finned neighbors. The closest many of us get to fish is when we take them out of a package and eat them; globally we have been eating them at an astonishing and unsustainable pace. Many of the rest we are squeezing out of their place with our ever

increasing footprint. We are not of their world, yet everything we do affects that aquatic world. We terrestrial, air breathing humans have never really got our minds around fish although our jaws are around them frequently.

This speaks to a key task of ecologists, biologists, educators and resource managers – creating awareness amongst the public, politicians and industry of these species. A little bit of ecological literacy about plants and fish would go a long way to creating a greater constituency that knows, cares and values all biodiversity. I will know we have “made it” when a plant or a fish gets top billing in people's minds as an item of biodiversity concern. A new and large generation of “fern-feelers” and “fish-squeezers” is desperately required.

Although jam-packed, the original ark could only have been partially filled with earth's biodiversity treasures. The perhaps metaphorical flood story gives the mistaken impression these treasures, the life on earth (but not in the water), could be easily gathered up and housed in a small place. The delusion continues in our thinking that a few scattered parks and protected areas will suffice to conserve biodiversity. As a pathway to future inclusiveness it would be helpful to understand and acknowledge these significant biblical oversights and how, perhaps subconsciously, they have influenced past conservation efforts.

The ark story needs a rewrite with an update! Today's ark (i.e. the Earth) can ill afford to ignore any species. Otherwise we build our conservation initiatives on a great story but an old one with poor ecological thinking. The original story is found in Genesis; we now need the genesis of a new awareness and inclusiveness for the conservation of all species.



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# Bats and Beavers

*Scientists have discovered that insect-eating bats have a very handy ally in European forests: the beaver.*

By felling trees, beavers thin out the forest canopy, removing obstacles that get in the way as bats pursue their flying-insect prey. Scientists from the University of Gdansk in Poland undertook their study to demonstrate that European beavers, which were extinct in Poland until their reintroduction after World War II, are important in maintaining healthy woodlands. They found that aerial hawkers – bats (or

birds) that hunt flying insects – were significantly more active around the beaver-modified streams.

In addition, beaver dams create waterlogged areas that attract insect prey favored by bats. Beaver-flooded and –logged forests supported the highest bat activity. Unfortunately, beaver ponds are quickly coated with duckweed, which interferes with echolocation and masks echoes

reflected from flying insects. But for most bats of Polish forests, beavers are very handy to have around.

Summarized from: Bat Conservation Times, Vol 9, No 1, January 2011

EDITOR'S NOTE: If you know of any similar studies in Alberta, *Nature Alberta* would like to hear from you.

## Arctic Grayling Symposium & Workshop 2011



### OUR CONSERVATION CHALLENGES AND OPPORTUNITIES

JUNE 7-9, 2011 • GRANDE PRAIRIE, ALBERTA

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This two-day Arctic Grayling symposium will be composed of a series of 20 minute presentations and a field visit to nearby grayling streams. The presentations will be organized into four sessions, each focusing on a primary theme: Biology and Natural History; Monitoring Approaches; Threats to Conservation; and Management Strategies.

Hosting the symposium are Trout Unlimited Canada, Golder Associates, and Alberta Sustainable Resource Development (Fish and Wildlife), in association with Fisheries and Oceans Canada, University of Alberta (Department of Renewable Resources), Alberta Conservation Association and the American Fisheries Society (Mid-Canada Chapter).

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Wildlife! Starring...

# Muskrat (*Ondatra zibethicu*)

BY DENNIS BARESCO

## WHAT IS IT?

What is a Muskrat? It's not really a rat. Though it seems to be a beaver of sorts, the only relationship is that they are both rodents. So what is a Muskrat? Answer: It is a very big mouse – but what a mouse! It has made water its home and has adapted superbly to an aquatic lifestyle.

As an animal that lives, breeds, eats and raises a family in the water, the Muskrat has many characteristics necessary to ensure, not just survival, but tremendous success. It has developed some expected qualities: dense, waterproof and buoyant fur; hind feet that, though only partially webbed, act as paddles for propulsion through the water; a flattened but narrow (unlike

a beaver's) tail for use as both a rudder and, when swimming underwater, a propeller; and an accomplished swimmer. However, it would take much more than that for a species to have the success which Muskrats have attained.

It is an understatement to say a Muskrat is an accomplished swimmer. An adult swims seemingly without effort and appears tireless – perhaps because of lots of experience: it can swim and dive when only three weeks old. A Muskrat is good at holding its breath: two to three minutes normally, but it can stay underwater for fifteen or so minutes. While this length of time is not unique to Muskrats – beavers can as well – it is a definite advantage when the need arises!

How does a Muskrat open its mouth and chew on stems and roots while underwater without drowning? It does so by closing the lips behind the teeth, with the incisors protruding; in other words, it chews with its mouth closed, like a beaver.

## HOME SWEET HOME

Muskrat houses may not seem as awesome as beaver dams, but these domed structures of mud, cattail stalks and pond weeds – which look like just a heap of plant garbage – serve their very practical purpose and are relatively ingenious structures. And of course, much of the construction material also doubles as food! If cattails, bulrushes and reeds are in short supply, a Muskrat will construct a living area in a bank burrow.

Then there are the winter “push-ups”: domes of frozen vegetation and mud which cover a hole in the ice. After the surface freezes over, a muskrat chews holes in the ice and builds the dome over the hole. Once covered with snow, the dome is, in effect, an insulated

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mini-lodge for one, used for rest, feeding and, of course, breathing. The holes will ice over thinly, but the muskrat keeps them open with continual visits, even though the surrounding ice may get to be a metre thick.

#### **MUSKRAT MENU**

Besides a variety of vegetation, Muskrats eat smaller animals like frogs, fish and mussels. Muskrats do not hibernate nor do they normally store food, so they must continue their food search

all winter, even if their pond is covered with thick ice – hence the value of the push-ups. It is somewhat amazing that they can even find food during winter, considering that it may be under a metre of ice and snow, in freezing-cold water and almost complete darkness.

#### **LIFE AND DEATH**

Spring break-up signals the start of mating activity. The competition between males for females is ferocious, and many

battles end in death for at least one of the participants.

For the female, all that matters is that she is impregnated. A month after mating, she gives birth to anywhere from one to eleven young (she will normally have a second litter in the season). Seeing these blind, hairless, and almost completely helpless newborns, it is hard to believe they will be swimming adroitly in only three weeks, but their development is speedy. Weaned after about three weeks, they will be on their

#### **They're everywhere!**

Muskrats are distributed across almost all of North America, including all of Canada except the tundra. One reason for the broad distribution is the common occurrence of wetlands in North America – which in turn, is one of the reasons, along with prolific breeding, for the species' great success. Though heavily trapped for its fur and eliminated in areas in which wetlands have been drained, Muskrats remain abundant overall.

own, independent of their parents (whether they like it or not!), when only four to six weeks old.

Like most rodents, Muskrats die young, either through accidents or predation. Three or four years of age is old, at which time they tend to become much less wary and thus an easy meal for predators.

### SUCCESS VERSUS PREDATION

If you happen to corner a Muskrat, do not pick it up unless you are wearing steel gloves! With its long cutting teeth, well-known courage and reputation as a vicious fighter when provoked or cornered, a Muskrat can cause serious injury, whether to a human, a predator or a neighbour entering its home territory.

For all its successful adaptations, Muskrats have numerous enemies, including Mink, Northern Pike and (as usual) humans. One thing Muskrats didn't develop for success was escape from predators in particular situations like crossing dry land. Muskrats can migrate considerable distances in the search for a new home – up to ten miles, which helps explain why they suddenly appear

at a prairie slough even though there is no other habitat for miles in every direction. But wandering around on dry land is dangerous, as they are an easy target for almost every terrestrial predator that spots or smells them.

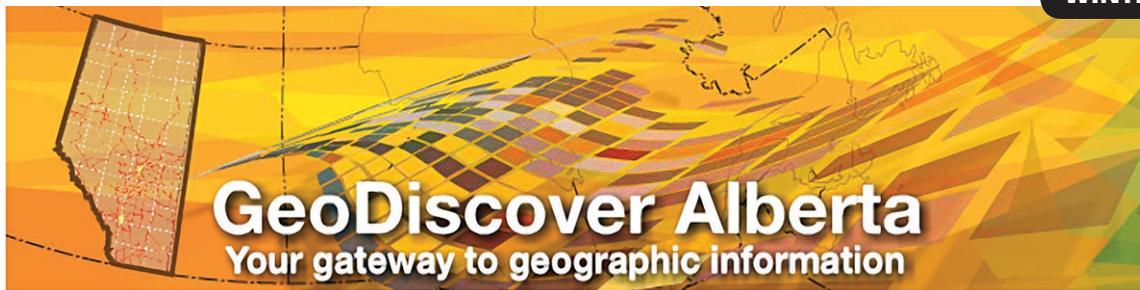
[Information for this article is from: The Sustainable Resource Development website; *The Mammals of Canada*. 1974; and other sources.]

### "Muskrat Love"

A rather odd topic for a song it was, but Captain & Tennille's 1976 cover of "Muskrat Love" hit # 4 on Billboard. Sound effects on the record (using a synthesizer) were meant, as Wikipedia puts it, "to evoke the imagined sound of muskrats courting." Muskrats can, in fact, be heard making sharp, whining sounds during mating season, but you may just hear a different tune of Muskrats fighting – "Muskrat Hate"?

GERALD ROMANCHUK





# GeoDiscover Portal: www.geodiscoveralberta.ca

*You can now access more than 140 layers of free land-related data and services through the GeoDiscover Alberta portal.*

This portal provides a single window to search and find the credible, up-to-date information needed to better manage activities on the landscape and is the most comprehensive program of its kind in Alberta.

The data and map services come from various Alberta government ministries and agencies and include: Administrative Boundaries; Township System; Access; Cadastral (urban and rural); Mineral Agreements; Utilities; Land-Use Management; First Nations land; Parks and protected areas; and Land-use Framework regional planning maps and data.

Sharing geospatial information will enhance land and resource stewardship and improve service delivery to Albertans. Please visit the GeoDiscover Alberta portal to explore the data and services, training materials and frequently asked questions: [www.geodiscoveralberta.ca](http://www.geodiscoveralberta.ca).

This is just the beginning, and GeoDiscover Alberta will evolve with time; as more ministries and agencies join, there will be more information and tools available for all sectors.

The screenshot shows the 'Catalogue Search' page of the GeoDiscover Alberta portal. At the top, there are navigation tabs for 'About Us', 'Catalogue Search', 'Information Centre', and 'Newsroom'. Below this is a 'DISCOVERY' sidebar with links to 'Map Viewer' and 'Catalogue Search'. The main content area features a 'Keyword Search' section with a text input field, a 'Search' button, and radio buttons for 'Exact text search', 'Any word', and 'All words'. A tip indicates that dates must be in YYYY-MM-DD format. Below this is an 'Advanced Search Options' section with a 'Where' subsection containing radio buttons for 'Anywhere' and 'Use geographic extent', a 'Find A Place' button, and a 'Geographic Coordinate System NAD 83 Display' map of Alberta. The 'What' subsection includes dropdowns for 'Data Category' and 'Type/Format', a 'Thesaurus' dropdown, and checkboxes for 'Synonyms', 'Related Terms', and 'Narrower Terms'. The 'When' subsection has radio buttons for 'Anytime', 'Time Period' (with 'From' and 'To' fields), and 'Date Posted' (with an 'After' field). The 'Who' subsection has a 'Publishing Organization' dropdown. At the bottom, there is a 'How' subsection with a 'Sort results by' dropdown set to 'Title' and a 'Search' button.



**A WINTER VISITOR IN ALBERTA, SNOWY OWLS ARRIVE IN MID-NOVEMBER, LEAVING IN LATE MARCH FOR THEIR ARCTIC BREEDING RANGE. ADULT MALES ARE MOSTLY WHITE; FEMALES AND, ESPECIALLY, JUVENILES HAVE BLACK BARRING OVERALL. "SNOWIES" - LIKE ALL OUR OWLS - MAKE WONDERFUL PHOTOGRAPHIC SUBJECTS. ROB MCKAY**

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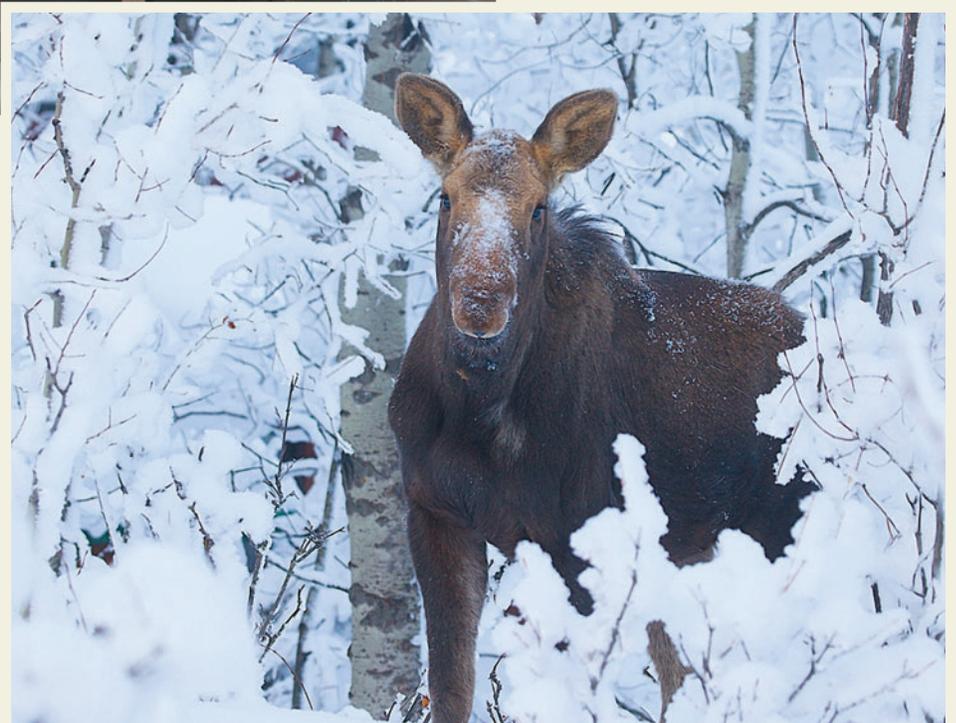
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**AN OVERWINTERING  
LONG-EARED OWL;  
SEE THE STORY, PG 33.  
MARK SCHIEBELBEIN**



**COMMON REDPOLLS – THE  
“CHRISTMAS BIRD”! – TAKE  
ADVANTAGE OF HOLLE’S  
FEEDER. HOLLE HAHN**



**A TYPICAL SNOW  
DAY IN THE CYPRESS  
HILLS! RICK PRICE**

# Nature *gallery*



**DO LONG-TAILED WEASELS CLIMB TREES, AND IF SO, WHY? SEE THE STORY, PG 6. LEN PETTITT**



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