

# Nature Alberta

C E L E B R A T I N G   O U R   N A T U R A L   H E R I T A G E



**WATERFOWL LAKE IN BANFF NATIONAL PARK, WITH MOUNT CHEPHREN IN THE BACKGROUND.**  
RICK PRICE

*feature article*

## Bats in your Hair and Other Wildlife Myths and Misconceptions



Sharif Galal ©

**A GREAT GRAY OWL COMING IN FOR A LANDING! SEE THE "FIRST HAND" STORY PG 32. DR. SHARIF GALAL**



**ALPENGLOW ADDS FIRE AND VITALITY TO OUR SUBJECTS." SEE JOHN WARDEN'S COLUMN, PG 16. JOHN WARDEN**

*Nature Alberta:  
Celebrating our natural heritage*

# Contents

NATURE ALBERTA VOLUME 44, NUMBER 3, FALL 2014

Editor's Page BY DENNIS BARESCO .....	2
Alberta Issues in Brief.....	5
Nature Alberta News .....	12
Close to Home: Nature Photography in Alberta BY JOHN WARDEN .....	16
Eyes on IBAs: A Birder's-Eye View on Cooperation and Conservation BY BROOK SKAGEN.....	21
FEATURE ARTICLE: Bats in your Hair and Other Wildlife Myths and Misconceptions BY LORNE FITCH .....	24
Nature Diary: Flying Squirrel BY DEBBIE AND ALAN GODKIN .....	31
First Hand: The Great Gray Owl...and a little bird! BY DR. SHARIF GALAL .....	32
Book Review: The Reindeer Botanist: Alf Erling Porsild 1901-1977.....	34
Speculation on how Bitterroot ( <i>Lewisia rediviva</i> ) arrived in Southwestern Alberta BY GEORGE W. SCOTTER .....	38
Up Close Naturally: What do "Bugs" Do When Winter Comes? BY MARGOT HERVIEUX.....	41
Black Coyotes or Coydogs? BY DICK DEKKER.....	42
The North Raven River Conservation Site.....	44
Grey Wolves, Black Wolves, Red Wolves, and Black Coyotes BY DICK DEKKER .....	45
Book Review: Wild Wolves We Have Known .....	46
Celestial Happenings BY JOHN MCFAUL .....	47
Club Page: Friends of Elk Island Society .....	48

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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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# Editor's Page

BY DENNIS BARESCO

## BEAUTIFUL CLIMATE CHANGE

A number of years ago, climate change was being touted as a blessing for Canadian farmers because it would lengthen the growing season and give crops more sun and increased warmth. Even the United Nations Intergovernmental Panel on Climate Change (IPCC) took a somewhat positive view of the impact climate changes would have on crop yields. My reaction was: oh yes, but also more erratic weather patterns, more drought, more floods, more hail, more wind – all those things that damage or wipe out crops, no matter how well they are growing.

Well, it now seems that the IPCC and other researchers have come to realize that the agricultural negatives are already outweighing the positives and will continue to worsen. I hate to say I told you so, but it's nice to be proven correct. On the positive side, as *Globe & Mail* business columnist Eric Reguly said: "We humans might drown in a flash flood or burn to a crisp in a midsummer heat wave, but we'd die with our stomachs full" ("The heat is on"; page 32, Report on Business, June 2014).

Not to worry, though: our federal government has taken action through cutting, eliminating or

underfunding climate change research and adapting strategies. After all, "ignorance is bliss" is it not? And as the Canadian rock group Trooper sang back in '77:

♪ We're here for a good time, not a long time! ♪

## CRESTED WHEATGRASS

When Crested Wheatgrass (*Agropyron cristatum*) was introduced here back in the 1930s, it was a godsend for erosion control and early spring grazing – which reduced grazing pressure on native grasslands – plus it was drought resistant. But, as with almost all alien species, it created problems, and still does. It is invasive on native grassland, out competes for soil moisture and nutrients, is long-lived and is a prolific seed producer with seeds that can develop into new plants very quickly. And, although young plants are tasty for grazers, it becomes more and more useless – except as fuel for grass fires! – once it goes to seed; almost nothing wants to eat the dry, gone-to-seed plants with their razor-sharp seed heads.

We'll probably never get rid of it, even if we wanted to – but it can be managed. To that end, the Saskatchewan Watershed Authority has an excellent four-page fact sheet on "Managing Crested



Wheatgrass in Native Grassland." You can download the pdf for free at:

[www.publications.gov.sk.ca/details.cfm?p=11094](http://www.publications.gov.sk.ca/details.cfm?p=11094); or  
[www.foothillsrestorationforum.ca/crested-wheatgrass-control](http://www.foothillsrestorationforum.ca/crested-wheatgrass-control)

## HUNTING WITH DRONES

It's hard to believe that any hunter with even the slightest ethical principles would use helicopters or drones to track and chase game animals; fortunately it's a rare event as far as we know. Nevertheless, there have been incidents in the last few years, as well as the promotion of drones as a hunting aid. Most jurisdictions in Canada and the U.S. are moving to either ban such so-called hunting (as Manitoba and Saskatchewan did this summer) or clarify the rules regarding hunting from the air.

I first became aware of this issue from a *Globe & Mail* article by Tu Thanh Ha, "The case against drone-aided hunting" (page A3, Wed, Sept 10, 2014). Using the term "hunting" seems to be a dubious use of that word – but then again, bear baiting, which is legal in Alberta, is even more unsportsmanlike!

It needs to be noted that there is an important place for drone-aided research, such as in counting

EDITOR'S PAGE cont'd...

wildlife; that would likely save lives by reducing helicopter crashes carrying biologists.

## ISSUES

The issues that affect Alberta keep piling up, and you will note that the "Alberta Issues in Brief" section (starting on page 5) is longer than usual. What Nature Alberta does with that section is simply give our readers a brief synopsis of those issues – which range from the positive to the benign to the downright chilling. But regardless of the type of issue, they are all worth thoughtful consideration, whether it is Trumpeter Swans, the Site C Dam, Pronghorn research, Julie Gelfand's Environment Commissioner's report or any of the others.

Despite the great temptation to use sarcasm or provide editorial comments on some of the items, we keep to reporting the facts and/or what was said about a particular issue, while avoiding obvious propaganda. Because of limited space, we can only provide an introduction to an issue in "Alberta Issues in Brief." However, it does allow readers who wish more detail to expand their knowledge, using a variety of internet or other sources.

## INSIDE NATURE ALBERTA

This edition, as usual, is chock-full of fascinating, informative and entertaining articles as well as wonderful photography. Personally, I'm very excited over Nature

# On the Covers:



## FRONT COVER

Fall is a great time for photographers: clear vistas, bright colours... and not as many tourists in places like Banff National Park. Rick Price captured a number of lovely images, including this one on Oct 2, 2014, at Waterfowl Lake, with Mount Chephren rising in the backdrop. Mount Chephren is named after the 4th Dynasty Egyptian pharaoh. Originally, it was named Pyramid Mountain, but because there was already a peak so named in Jasper National Park, it was renamed in 1918.



## INSIDE FRONT COVER

"The Great Gray Owl is one of the largest and tallest owls in the world." So begins Dr. Sharif Galal's charming story about a Great Gray Owl and a pesky little Red-winged Blackbird near Bragg Creek (in "First Hand" page 32). Sharif was thrilled to witness and

photograph the event; it was, as he says, "one of the most touching moments I have seen during fifteen years of photography."

"Alpenglow," says John Warden, "adds fire and vitality to our subjects." John's articles and photos continue to enthrall readers. This edition's submission, "Freeborn's Lament," is no different. The "Freeborn" in the title refers to early 1900s climber Frank W. Freeborn, who was a charter member of the Alpine Club of Canada. You will find it beginning on page 16.



## INSIDE BACK COVER

From these photos, it is obvious that Jean Connor's backyard is a classic bird lure: feeders, berries, diverse vegetation. While it is expected that numerous species will come to the feeders, it is perhaps unusual to see those in the photos feeding together, in particular



the three Corvids in the one image (a Magpie, a Blue Jay and lower down at the suet feeder, a Crow). As Jean said: "We sure were surprised seeing these different birds watching one another while eating at the same time. My friends loved the pictures and said, 'it's like all the people that come to your home.' Ha, ha... yes, everyone's welcome here."



## BACK COVER

Trying to determine how different species of flowers arrived where one finds them is often a challenge for botanists in the absence of definitive information. It is the floral equivalent of a "whodunnit"! This time, Bitterroot is the subject of George Scotter's intriguing article, "Speculation on how Bitterroot (*Lewisia rediviva*) arrived in Southwestern Alberta" starting on page 38. Harvey Abraham's lovely

photo is of a pink-phase Bitterroot.

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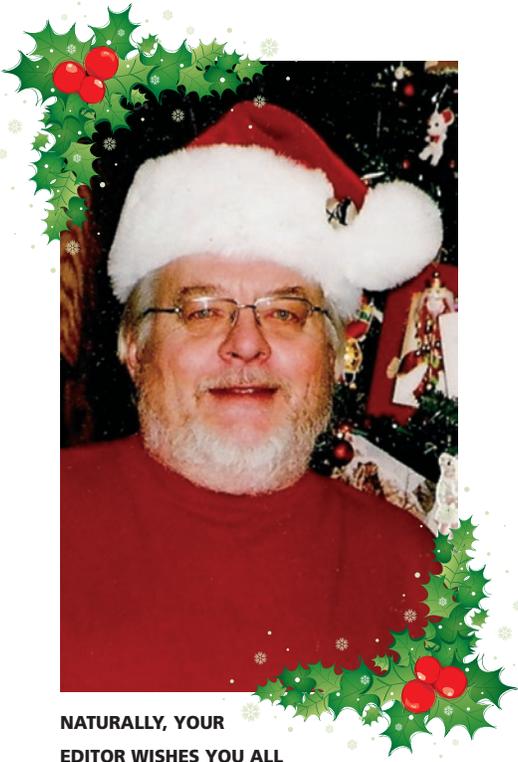
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Alberta's great new initiative, "Notable Conservationists" (page 14), which in effect is a Naturalist Hall of Fame. You can read about one such naturalist, Elsie Cassels McAlister, on page 15.

It has been very gratifying as *Nature Alberta* Editor to receive so much superb material from so many excellent authors and sources. Having too little material has never been my problem! Having said that, you are welcome to provide Nature Alberta with your own Alberta-based stories and articles and photos...or simply letters commenting on the magazine's content. I look forward to hearing from you!



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A MERRY CHRISTMAS!**

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### COMING UP:

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## ALBERTA ISSUES IN BRIEF

## Pollinators Update: No Benefit to Soybeans from Neonicotinoids?

The U.S. Environmental Protection Agency has concluded that neonicotinoid seed treatments provide little or no overall benefits to soybean production in most situations. Published data indicate that in most cases there is no difference in soybean yield when soybean seed was treated with neonicotinoids versus not receiving any insect control treatment.

Corn and soybean, along with many other crops, are treated with the neonicotinoid group of pesticides, either through seed

treatment or sprayed, ostensibly to combat insect pests of those crops. However, hundreds of scientific papers have linked neonicotinoids – directly and/or indirectly – to widespread losses of beneficial insects, (including pollinators), aquatic and terrestrial invertebrates and avian species.

Notwithstanding the scientific conclusions, the issue and its solution is complicated by intense lobbying from the pesticide industry and parts of the agricultural sector – and the government response to the lobbying.

Meanwhile, Ontario beekeepers have launched a lawsuit against two big chemical companies, Syngenta AG and Bayer CropScience, alleging that their pesticides have caused widespread bee deaths which has driven up costs and reduced honey production. The beekeepers allege that the companies were “negligent” in the “design, sale, manufacture and distribution” of neonicotinoid pesticides. The lawsuit may become a class action suit.

## New ESRD Minister

Kyle Fawcett, PC MLA for Calgary-Klein, has been named the Minister for Environment and Sustainable Resource Development (ESRD). Mr. Fawcett, who is thirty-four years old, is a graduate of the University of Calgary, with a bachelor of arts degree in political science and economics. He was born and raised in Calgary and now lives in Calgary’s Mount Pleasant community. Bill Werry has been named as his deputy minister.

Responsibility for Parks has been moved to ESRD. The Tourism, Parks and Recreation ministry has been integrated into other ministries, with tourism and recreation becoming part of the new department, Culture and Tourism.

## Environment Commissioner’s 2014 Fall Report

The 2014 Fall Report from Julie Gelfand, Canada’s Environment Commissioner, was tabled in the House of Commons on Tuesday Oct 7th. The Report specifically examines the following issues:

- Mitigating Climate Change
- Environmental Monitoring of Oil Sands
- Marine Navigation in the Canadian Arctic
- Implementation of the Canadian Environmental Assessment Act, 2012
- Departmental Progress in Implementing Sustainable Development Strategies
- Environmental Petitions Annual Report

The report – well researched and factual – is an interesting and important document well worth perusing, if not reading in its entirety. As might be expected, the Canadian Government does not come out looking good. It is available on the Office of the Auditor General of Canada web site ([www.oag-bvg.gc.ca/internet/English/admin\\_e\\_41.html](http://www.oag-bvg.gc.ca/internet/English/admin_e_41.html)).



## Site C Dam Given Approvals

On October 14th, 2014, both the federal and B.C. governments approved environmental certificates for the construction of the hydro-electric Site C Dam on the Peace River. The earth-filled dam, just southeast of Fort St. John and close to the BC-Alberta border, will be 69 metres high with an 83 kilometre-long reservoir. Its expected negative effects are an issue for Alberta as well as BC.

In granting the approvals, BC Environment Minister Mary Polak and Federal Environment Minister Leona Aglukkaq both stated that the dam is in the public interest, with the benefits justifying the considerable adverse environmental, social, agricultural and heritage effects.

The Site C Dam has been controversial for many years, having been rejected twice in the 1980s as too expensive and too damaging. The benefits in 2014 appear to be limited to construction jobs and electric power for the potential Liquid Natural Gas (LNG) exporting projects that the BC government has been hoping will go ahead. Site C, potentially producing 1,100 megawatts of capacity annually, is intended to power fracking operations, mines and LNG compressor stations as well as pipeline pumping to the west coast. As BC Premier Christy Clarke stated: "You can't power up these huge [LNG] facilities without more power, so BC Hydro's going to have to build Site C – we're in favour of making that happen." Site C is being

touted – perhaps to make it seem more palatable – as producing enough potential electricity to power 450,000 homes; however, few if any 'homes' will actually be powered by the dam unless they're in California, which has long been suggested as another destination for BC's surplus electricity.

A joint review panel report released in May concluded that the permanent negative effects of the dam and reservoir would be significant and irreparable. Lost would be: thousands of acres of prime farmland; First Nations traditional-use land and resources; heritage sites; and wildlife habitat (with the resulting severe, unmitigable effects on fish, plants and wildlife). Approximately 30,000 acres in total would be impacted. The panel also found that the province and BC Hydro (which is a Crown corporation) have failed to look at alternatives to the Site C dam in particular, geothermal energy which could potentially power all of BC.

### THE ALBERTA CONNECTION:

During the hearings, both Alberta Environment and Sustainable Resource Development (ESRD) and Parks Canada (on behalf of Wood Buffalo National Park) expressed deep concerns with the potential damage the dam would do to this province, especially in conjunction with two other BC Hydro dams – the W.A.C. Bennett and the Peace Canyon dams – having already significantly altered the flow of the river into Alberta. One of the results may be more

restrictive fishing on the Peace River. Officials with Wood Buffalo National Park asked that cumulative impacts of all three Peace River dams on the Peace-Athabasca Delta (80 per cent of which is located within the park's boundaries) be taken into consideration when reviewing the project.

There are many other problems associated with the dam and with BC Hydro's proposal, which is why the dam has been opposed by many local farmers, ranchers, Treaty 8 First Nations, rural residents and environmentalists. The cost to BC taxpayers is certainly one point of contention: the estimated cost of a minimum of \$7.9 billion is from 2011; as well, according to the World Commission on Dams, as a rule projects of this size go into at least 50% cost overruns and often much more. Perhaps even more unsettling is that many, if not most, of the LNG projects may never go ahead due to construction costs and a glut of supply. Thus, the predicted windfall of government revenues is, as BC Finance Minister Mike de Jong said Oct 21st 2014, "not quite as lucrative as it once was." The government has responded with legislation to slash the already low tax rate, plus add tax incentives

B.C. Energy Minister Bill Bennett has said that if the project were approved, construction could start as early as this coming January, with a completion date of 2024. The approvals may be moot, however, and not just because of the vague need and cost to taxpayers; First Nations are likely to take legal action to defend what they see as their constitutional rights.

## Southwest Calgary Ring Road Concerns

BY LISA DAHLSEIDE, EXECUTIVE DIRECTOR, WEASELHEAD/GLENMORE PARK PRESERVATION SOCIETY  
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The Weaselhead/Glenmore Park Preservation Society and Calgary River Valleys hosted a Public Open Forum on October 7, 2014, the goal of which was to educate the public about the current SW Ring Road design for crossing the Elbow River Valley, South Calgary's drinking water source. It was apparent that many citizens are equally as concerned as we are, with standing room only; the Cedarbrae Community Centre had 400 plus people packed in the gym, all eager to learn and express their concerns.

Technology is available to construct the best road possible with enhanced environmental mitigation that will respect the integrity of the Elbow River Valley. The Weaselhead Preservation Society hopes for a design that will reduce the impacts on this valued area. Our high level concerns with the cut-and-fill design include the settling of the berm over the long term; the realigning and restricting of the meandering Elbow River; the long term effects on water quality, parks, community and wildlife.

The South West Connecting Calgary Ring Road Geotechnical Assessment (Thurber, 2006) confirms that there are almost 20 meters of alluvial and lacustrine deposits on the Elbow River valley bottom. The sand and gravel at the surface may be compactable in the short term, but the lacustrine deposits at depth are notorious for settling over the long term. While a cut-and-fill design may be the least

expensive to construct, we submit that it will be extremely expensive and disruptive to maintain in the medium and long term as the substrate continues to settle.

The dynamics of the meandering Elbow River, its alluvial aquifer and the entire hydraulic ecosystem should be much better understood by the engineers developing the causeway. Current plans will alter the ecosystems, biodiversity, water quality, fish habitat and more, while reducing forest rejuvenation and increasing risk of forest fires over the long-term.

Realigning and restricting the river will result in sediment loading. Air-borne salt and other by-products will impact the drinking water in the Glenmore Reservoir. The wetlands contribute to maintaining water quality by filtering and cleaning water prior to entering the Glenmore reservoir and we fear this has not been considered in the latest road design plans.

There is no other natural area comparable to the Weaselhead Park within Calgary City limits and the long-term effects due to noise, light and biodiversity loss need to be addressed. Technology is available to construct a road with minimal sound disturbance to the area, as well as reducing the environmental impacts and allowing a wildlife corridor.

In late winter or early spring 2015, Calgary River Valleys will be hosting a workshop calling upon

experts to help come up with viable design choices. Options exist for Alberta Transportation where the river is given the space to move and shape the environment freely. An open concept design that spans the Elbow River valley would allow for this. Positive local examples can be seen on Stony Trail crossing the Bow River at Bowness Park, or seen along the current 37th Street crossing Fish Creek Park.

The designers will be given direction from the government about what should be considered. If the main concern is, "make it the cheapest", that's what we will get, regardless of the long term costs. If the cost to the environment and community is the main concern, then we can get a river crossing with reduced impacts on the drinking water source and valued Weaselhead Natural Area.

VISIT [WWW.THEWEASELHEAD.COM](http://WWW.THEWEASELHEAD.COM) FOR MORE INFORMATION, INCLUDING MAPS AND ILLUSTRATIONS.

### SOCIETY MISSION:

The Weaselhead/Glenmore Park Preservation Society (a Nature Alberta Affiliate Club) works to protect the flora and fauna of the Weaselhead and Glenmore Parks and to preserve the integrity of the Elbow River.  
[www.TheWeaselhead.com](http://www.TheWeaselhead.com)



## New Pronghorn Management Guides

ARTICLE FROM WILDLIFE CONSERVATION SOCIETY NEWSROOM

Biologists from the U.S., Mexico, and Canada have collaborated for the first time to produce recommendations to protect and manage North America's fastest land mammal – the Pronghorn (*Antilocapra americana*).

Pronghorn are endemic to North America and numbered an estimated 35 million in the early 19th century. Today, about 700,000 remain and more than half of those live in Wyoming. [The Alberta population has been estimated at between 10,000 and 20,000 - Ed.] The guides provide the latest “state-of-the-art” Pronghorn management recommendations on such topics as assessing habitat and life histories, harvest, predation, and population dynamics.

“These guides are the product of collaboration across borders,”

said co-author Paul Jones, Senior Biologist with Alberta Conservation Association. “This is the first time that biologists from these three nations have joined together in the common interest of informing the conservation and management of Pronghorn. No matter what part of the Pronghorn range you are living or working in, the issues facing the animals are the same.”

Some of the ongoing priority issues faced among scientists and agency biologists include managing Pronghorn under the pressures of industrial development and understanding and mitigating the impacts of linear infrastructure (roads, fences, etc.) on the animals as they move across the landscape. These topics were updated and among those highlighted in this edition of the guide.

Wildlife Conservation Society (WCS) Associate Conservation Biologist and co-author Renee Seidler said, “This document pulled current information from some of our best, current resources on Pronghorn management and summarized it all in one place. It will aid biologists, conservationists, managers, and land owners alike in making the most informed decisions for Pronghorn conservation.”

FOR FURTHER INFORMATION ON THIS STORY, OR TO TALK WITH RENEE SEIDLER, PLEASE CONTACT SCOTT SMITH AT 718-220-3698 OR EMAIL SSMITH@WCS.ORG.

\* Pronghorn females usually give birth to twins, but there is a high mortality rate of fawns during the first month of life.

**PRONGHORN IN A WYOMING GAS FIELD.** JEFF BURRELL/WILDLIFE CONSERVATION SOCIETY



## Conserving the Waldron

INFORMATION FROM NCC WEBSITE

The Waldron Ranch was established in 1883 as what was then called the Walrond Ranch by Duncan McNab McEachran of Montreal, with financial backing predominantly from England's Sir John Walrond-Walrond. An option to acquire a conservation agreement on the 30,535-acre (12,357-hectare) Waldron lands was negotiated between the Nature Conservancy of Canada (NCC) and the Waldron Grazing Co-operative Ltd on April 3, 2013.

This was the first opportunity since the late 1800s to conserve this landscape for all time, ensuring the protection of the headwaters consisting of critical streams and rivers for the entire Canadian Prairies, which provide water for millions of Canadians and countless wildlife species, while still allowing it to be a working ranch landscape. The Waldron Conservation Project is in Alberta's southern foothills, situated in a broad valley between the 70,000 acre Bob Creek Wildland Park (the Whaleback) to the west and the 97,000 acre Porcupine Hills Forest Reserve to the east along the eastern slopes of the Rocky Mountains.

The Waldron Conservation Project, composed primarily of native habitat, is an area of incredible diversity, rich history and spectacular scenery. Those who drive along the ribbon of pavement known as the Cowboy Trail (Highway 22) know this landscape well.

On September 11, 2013, NCC's Alberta Region publicly announced the historic agreement and the urgency to raise the remaining \$3 million to meet fundraising goals. The total project cost more than \$37.5 million, with The Waldron Grazing Co-op members making the largest donation. The Alberta government provided \$12.2 million, Ottawa \$4 million and the Calgary Foundation \$1 million.

NCC has now announced that the Waldron as we know it has been officially conserved; NCC would like to thank all donors who have

had a direct impact in assisting with conserving this landscape for all time.

The Waldron Grazing Cooperative positioned to purchase the adjacent property known as the King Ranch, which extends the property of the Waldron an additional 4,200 acres (1,700 hectares). NCC and the Cooperative are now looking into potentially placing an additional easement on this property as well, therefore assuring the entire block of deeded land will remain intact and conserved for all time.

The Waldron is the largest remaining block of deeded (private) land along the eastern slopes of Alberta. The rough fescue grasslands that dominate the area provide essential services, including water filtration, carbon sequestration, soil protection, and forage for both domestic and wild animals

WALDRON LANDSCAPE. KYLE MARQUARDT



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## Industry Footprint Grows in Endangered Caribou Habitat

FROM AWA NEWS RELEASES, OCTOBER 10 & OCTOBER 14, 2014

Over 560,000 hectares has been auctioned for new oil and gas leases in threatened Alberta woodland caribou ranges since October 2012. There are no meaningful surface disturbance limits on these leases even though the federal government directed provinces in October 2012 to reduce industry footprint within their caribou ranges. A further 35,000 hectares of oil and gas lease sales in caribou range are planned from mid-October to early December 2014.

Meanwhile, extensive logging is occurring within and adjacent to two endangered west central Alberta caribou ranges, counter to extensive evidence that forest re-growth, not new harvesting, is required for caribou recovery. These caribou populations, the Little Smoky and À La Pêche, are the focus of Alberta's upcoming caribou range plans, the first plans Alberta will provide as required under the federal caribou recovery strategy.

Alberta Wilderness Association (AWA) has called on the Alberta government to develop meaningful, enforceable rules to reduce industry's footprint in caribou habitat. Provincial range plans required under the federal boreal caribou recovery strategy should provide tools to achieve this step.

Over 80% of caribou ranges in northeast Alberta had bitumen leases as of 2011, and population rates for caribou there have declined by an estimated rate of 5-15% per year over the past

two decades. Demand for liquids-rich gas accounts for much of the intensive energy activity in caribou ranges in northwest and west central Alberta.

Significant energy extraction is possible while steadily recovering caribou habitat. Alberta could place total surface disturbance limits within caribou ranges and give companies alternatives to prove tenure, to motivate longer-distance directional drilling and pooling of leases. In that way, energy companies could still extract very significant resources while aggregating and reducing their surface footprint. Significant forestry activity is possible outside caribou ranges in west central Alberta, while steadily recovering caribou habitat. AWA's analysis suggests that a broad regional agreement to share wood fibre quotas across west-central Alberta would enable logging to stop in caribou range and buffer areas, yet would reduce total regional forestry cuts by only 15-20%.

Energy and forestry footprint in caribou ranges stimulates deer, moose, and predator populations, robbing the caribou of their ability to minimize overlap with predators. Provincial scientists assessed Alberta woodland caribou as 'endangered' in 2010, though the province has not yet updated their listing from 'threatened'. Caribou recovery is both technically and biologically feasible, according to scientists.

FOR MORE INFORMATION: CAROLYN CAMPBELL, ALBERTA WILDERNESS ASSOCIATION, (403) 921-9519 (CELL)

## Parks Canada Rejects Maligne Lodge in Jasper

In the Spring 2014 *Nature Alberta*, we reported on the Maligne Tours proposal for a 66-suite luxury hotel plus 15 tent cabins along Maligne Lake's north shore. There was considerable opposition, not least of which was because the development was in violation of Parks Canada's policies and contrary to the National Parks Act.

On July 25, 2014, Parks Canada announced that it has rejected the hotel proposal. The extensive input they received from Canadians and the goals of Canada's National Conservation Plan, were cited as factors in the rejection of the luxury hotel.

However, 13 other elements of the Maligne Tours proposal were accepted by Parks Canada subject to more detailed design-level proposals. This includes the up to 15 tent cabins and other fixed-structure elements. Many of the original ecological and environmental concerns are still valid, including the precedent that would be set. It has been reported that Ecojustice will be taking the matter to court on behalf of the Canadian Parks and Wilderness Society and the Jasper Environmental Association because even the commercial overnight accommodations (the tent cabins) are prohibited by the Park's management plan. It remains to be seen how Parks Canada will respond to the detailed proposals, though it has said that it is considering changing the 2010 management plan to get around that.

## Trumpeter Swan Removed from Alberta's Threatened Species List

FROM ALBERTA GOVERNMENT NEWS RELEASE, JULY 30 2014

Collaborative efforts have resulted in the Trumpeter Swan (*Cygnus buccinator*) being removed from Alberta's threatened species list; it is now identified as a species of special concern. This means, while still vulnerable, it is not immediately in danger.

Robin Campbell, when he was Minister of Environment and Sustainable Resource Development, stated: "I'm pleased the Trumpeter Swan can now be removed from the threatened species list. This success is a testament to the hard work, careful planning and commitment

of Albertans to preserve our province's biodiversity."

This and other changes to the at-risk species list are the result of science-based recommendations brought forward by Alberta's Endangered Species Conservation Committee and its Scientific Subcommittee.

As part of this work, four additional species were added to the threatened species list due to declining or small populations. These species are: Athabasca Rainbow Trout; Bull Trout; Pygmy Whitefish; and Western Grebe.



[HTTP://ALBERTA.CA/RELEASE](http://ALBERTA.CA/RELEASE)

A recovery plan for each of the listed species will be created and put in place with help from stakeholders to protect and rebuild these populations.

## Gravel Pit Proposed

Associated Aggregates Inc. has applied to Clearwater County for a development permit to operate a gravel pit (the Hankinson Pit) on a property adjacent to the Stainbrook Springs property and bordered by the North Raven River (also known as Stauffer Creek). This proposal has created considerable angst because of the potential damaging impact on the watershed, the North Raven River and its fishery.

The Stainbrook Springs property was jointly purchased in 2001 for \$139,000 by the Alberta Conservation Association, Alberta Fish and Game Association and Trout Unlimited Canada to protect groundwater supplies for the North Raven River. The site is bordered by the North Raven River and contains a number of groundwater springs, which are critical habitat for spawning and rearing of brook

trout and maintaining flows in the North Raven River. Another site, the 125 acre Leavitt property at the headsprings of North Raven River, was purchased in 1997 for \$152,695 with Buck for Wildlife funds by the Crown to ensure integrity of this stream. Millions of dollars and thousands of hours of volunteer manpower have gone into restoring the North Raven River into the healthy environment it is today as Alberta's top trout stream. The North Raven River is one of very few spring-fed creeks in all of Alberta. This stream is highly renowned as a blue-ribbon brown trout fishery.

This isn't the first time a gravel pit has been proposed for the area; in fact, this is the sixth attempt in the last three years. The final decision is up to Clearwater County. In response to a question by *Nature*

*Alberta*, the County's development officer, Eleanor Pengelly, stated:

"Thank you for your inquiry regarding the Hankinson gravel pit. We received a development permit application for a gravel pit on SE 18-37-05 W5M. Due to the proximity to the North Raven River, we have asked the applicant, Associated Aggregate, to supply an Environmental Assessment Report for the proposed pit. The report will need to address issues identified by Alberta Environment and Sustainable Resources as relevant to this proposal. Once we receive that report, we will consider the application complete. The next step after that will be sending the information package out to affected parties for input and then the development permit application will be presented to the Municipal Planning Commission for a decision."



# Nature Alberta NEWS



## Magazine Archives Now Online!

Now online: the first five years of *Nature Alberta* magazine, starting with Vol 1, No. 1, January-February 1971.

Back then, it was simply called the Federation of Alberta Naturalist (FAN) Newsletter and later the *Alberta Naturalist*. You can find them at [naturealberta.ca](http://naturealberta.ca), under Publications (scroll down past "Submission Guidelines").

It's fascinating to read these articles from the past and see the names associated with the writing and goings-on; the first issue even listed all the members of FAN at that time. Also included are the names of the original executive of FAN: a who's who of famed naturalist excellence:

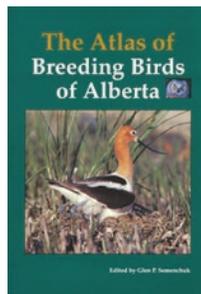
- President: Dr. M. T. Myres (of the Calgary Field Naturalists Society)

- Vice President: D. A. E. Spalding (of the Edmonton Natural History Club)
- Secretary: Ian Halladay (of the Calgary Field Naturalists Society)
- Treasurer: Helen Schuler (of the Lethbridge Natural History Society)

Have a read; it's worth it! At some point next year – Nature Alberta's 45th Anniversary! – we hope to have an index of all the articles in the magazine going back to Vol 1, No. 1; volunteer Michael Rowell is busy working on it.

## The Bookstore

Nature Alberta's publication *The Atlas of Breeding Birds of Alberta* (1995) is almost sold out and will not be reprinted. If you want a copy for yourself or as a gift, now is the time to get it! Price is \$24.95 (plus gst & shipping). The follow-up *The Atlas of Breeding Birds of Alberta: A Second Look* is also \$24.95 (plus gst & shipping).

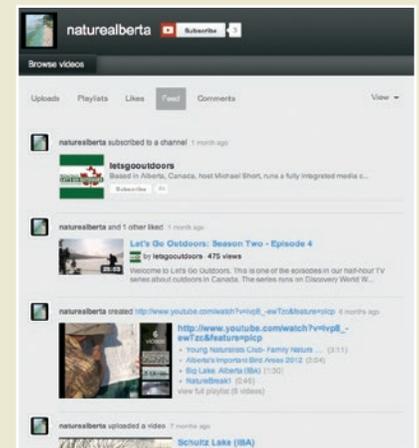


The Bookstore has about twenty other titles that you may wish to purchase, either as a gift – it's almost Christmas! – or for yourself. Go online to [naturealberta.ca/store](http://naturealberta.ca/store) and click on "Books" under "Categories" for the full list.

## Nature Alberta & YouTube

Cheyenne Lemery, Nature Alberta's Communications Specialist, wants you to know that Nature Alberta has its own YouTube channel now. All kinds of "good stuff" is there for you to view. Visit:

[youtube.com/naturealberta](http://youtube.com/naturealberta)



## SPEAKING OF CHRISTMAS . . .

Nature Alberta would be most grateful to receive a Christmas donation so we can continue our nature education, conservation and citizen science projects. To make an online donation, go to our website ([naturealberta.ca](http://naturealberta.ca)) and click the Donate button on the left. Alternatively, you can mail a cheque to: Nature Alberta, 11759 Groat Road, Edmonton, AB, T5M 3K6. Or, you can be a partner with Nature Alberta through ongoing support via direct debit; your monthly or recurring gift allows us to plan ahead and respond to conservation issues around the province.

## Being a Member of Nature Alberta

Nature Alberta provides a five dollar membership discount for members of our corporate and affiliate clubs: the “Extended Membership” category. It has come to our attention that some clubs and their members may not be fully aware of changes to our Extended Membership fees and options; as well, some club websites need to be updated.

This is a good time to remind everyone of all the membership options. Membership rate changes were approved by the Board at our Jan 2014 board meeting and went into effect 1 Apr 2014. The rate changes are documented as part of our Policy and Process Guide document and were announced in the Winter 2014 issue of our magazine (Page 9). The changes are reflected on all renewal notifications (both hard and E-mail versions), and on our on-line membership site. The new prices are included in each magazine. Here’s the gist of it all.

### INDIVIDUAL MEMBERS

**1 YEAR INDIVIDUAL MEMBERSHIP:**  
\$25.00 e-version; \$40.00 hard copy

- Individual Members will receive the e-version of *Nature Alberta* magazine or for an additional \$15.00 surcharge (to help cover the substantial costs of printing and postage), can receive a hard copy.
- Individual Members will receive 10% off Nature Alberta merchandise and books except items that are already reduced or on special.
- All Individual Members may vote at the Annual General Meeting.

### YNC FAMILY MEMBERS

**1 YEAR FAMILY MEMBERSHIP:**  
\$25.00 e-version; \$40.00 hard copy

- Family Membership includes enrolment in the Young Naturalist program (will receive an e-version *Nature Wild Magazine*, notices of all YNC events, etc.).
- Family Members will receive the e-version of Nature Alberta magazine or for an additional \$15.00 surcharge, can receive a hard copy.
- Family Members will receive 10% off NA merchandise and books except items that are already reduced or on special.
- Each Family Membership has one vote at the Annual General Meeting.

### EXTENDED CLUB MEMBERSHIP

**1 YEAR EXTENDED CLUB MEMBERSHIP:**  
\$20.00 e-version; \$35.00 hard copy

- Available to any individual who is a current member in good standing of a Corporate or Affiliate club of Nature Alberta. The applicant must provide the name of their Corporate or Affiliate Club.
- Extended Members will receive the e-version of *Nature Alberta* magazine or for an additional \$15.00 surcharge, can receive a hard copy (previously the Extended membership discount was offered only with the e-version but is now available with both e-version and hardcopy and covers both individual and family membership categories).



### DID WE MENTION CHRISTMAS?

For the person who has everything except a membership in Nature Alberta...why not a gift membership to Nature Alberta so they, too, can enjoy our magazine?! For families with younger children, gifting the Family Membership and thus making them part of the Young Naturalist Program is ideal. Go for it! Plus – have yourselves a really great Christmas!!



## Introducing Alberta's Notable Conservationists

*"If I have seen further than others, it is by standing upon the shoulders of giants"*

—Isaac Newton

Do you remember what inspired your interest in the natural world? Was it something that was always part of who you are, or did others around you foster this curiosity? Perhaps you even had a mentor - a naturalist, teacher or family member who shared outdoor experiences with you. Or, maybe you are the mentor!

Working in collaboration with the Fish and Wildlife Historical Society, Nature Alberta has recently launched an online project called Notable Conservationists to recognize and honor Alberta's humble heroes of the natural world. In this case, we have defined a conservationist as someone who works to protect natural resources, including educators, amateur naturalists, landowners, biologists or conservation groups. We want to spotlight people past and present who have showed dedication to sharing and protecting Alberta's natural resources. Notable Conservationists are the stories of those who inspire us.

Some of the names making their way onto the growing *Notable Conservationists* list will ring a bell: for example Joseph Burr Tyrrell, the namesake of the Royal Tyrrell Museum in Drumheller; or Grant MacEwan, for whom MacEwan University in Edmonton

is named. While these names may be familiar, their personal histories including how they developed an affinity or connection to the natural world might be less known. Notable Conservationists aims to provide a glimpse into what may have motivated the people who continue to inspire the naturalists of today.

In some cases, these people have been our friends, colleagues and teachers. Dawn Dickinson, a long time member of one of Nature Alberta's clubs (Grasslands Naturalists) was one of the first names nominated for *Notable Conservationists*. Martin Paetz was also included to begin the list. Porcupine Stone Productions donated an audio interview with Paetz, Alberta's first provincial fisheries biologist. The interview has been turned into a video specifically for the project and is currently online.

If the stories about the people behind Alberta's conservation are of interest to you, please consider



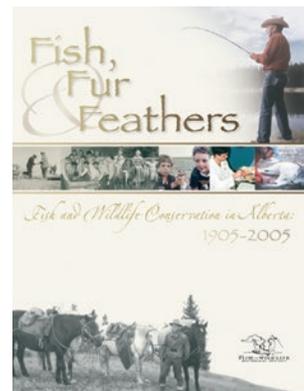
**NOTABLE CONSERVATIONIST GRANT MACEWAN STOPS TO VISIT WHILE ON A HIKE (1968).** PROVINCIAL ARCHIVES OF ALBERTA (J.182)

purchasing a copy of the book *Fish, Fur & Feathers*.

Many Notable Conservationists stories originate from this wonderful resource.

Purchasing a copy online for yourself or as a gift is a great way to support Nature Alberta and projects like Notable Conservationists.

You can purchase a copy of *Fish, Fur & Feathers*, view our current list of Alberta's Notable Conservationists and nominate new names online by visiting: <http://naturealberta.ca/nature-in-alberta/notable-conservationists/>



## ELIZA (ELSIE) CASSELS MCALISTER

A STORY FROM NOTABLE CONSERVATIONISTS; AN ONLINE RESOURCE DEVELOPED COLLABORATIVELY BETWEEN NATURE ALBERTA AND THE FISH AND WILDLIFE HISTORICAL SOCIETY



Elsie Cassels McAlister was born in Scotland in 1864. She met and married William Cassels with whom she established a homestead south of Red Deer, Alberta in 1889.

McAlister began her involvement in the Alberta Natural History Society (ANHS) in 1902 after moving to Red Deer. As an early member, she helped establish Purple Martin colonies at Sylvan Lake. McAlister's involvement in an early campaign for the creation of a provincial park covering the Red Deer River Canyon was unsuccessful in 1906. However the idea would evolve over the years into the development of the Red Deer Bird Sanctuary. This initiative was undertaken successfully years later when she became the first woman to hold an official position in a Canadian natural history society; she was vice-president of ANHS between 1917 and 1924.

A successful application by ANHS to the Commissioner of Canadian National Parks was made in 1923 to have the land designated as a

Federal Bird Sanctuary. Today, the area is known as the Kerry Wood Nature Centre and Gaetz Lakes Sanctuary.

McAlister's time was often in demand as a lecturer on birds.

Audiences ranging from school children to women's groups would gather to hear her speak on topics including bird identification and preservation of natural habitats. Those who met her often noted her approachable demeanor, energy and knowledge of the natural world, attributes that likely contributed to her success as an educator and speaker.

She was also a keen writer and contributed her observations to *The Canadian Field-Naturalist* between the years of 1920 to 1935. Her work was also published in the Red Deer Advocate.

McAlister was actively involved in fieldwork for over 40 years of her life. Her interest in the flora and fauna of the Red Deer area are documented in correspondence with respected naturalists, ornithologists and friends including one of Alberta's renowned biologists, William Rowan.

While homesteading, McAlister relied on subsistence hunting but



FRONT (SEATED), 3RD FROM RIGHT: ELIZA CASSELS MCALISTER. RED DEER & DISTRICT ARCHIVES, P7014; OLD TIMER'S REUNION; [1934]

was strongly opposed to shooting birds for collection or research. Her impressive ability to identify birds by sight and call was developed through a lifetime of observation and years of experience in the field.

Elsie Cassels McAlister passed away from a stroke, November 12, 1938.

*"I know of no prettier sight than a flock of Redwings flying back and forth over their nesting grounds in the morning sunlight, trilling their lovely call note and spreading their scarlet wings to show the gorgeous scarlet and cream-edged shoulder patch as they hover over the nest."* –Eliza Cassels McAlister

To learn more about McAlister and other Alberta *Notable Conservationists* online, visit: <http://naturealberta.ca/nature-in-alberta/notable-conservationists/>

TO LEARN MORE ABOUT ALBERTA'S CONSERVATION HISTORY PURCHASE A COPY OF THE BOOK *FISH, FUR & FEATHERS* ONLINE AT: [HTTP://STORE.NATUREALBERTA.CA/](http://store.naturealberta.ca/)



JOHN WARDEN

## Close to Home: Nature Photography in Alberta

# Freeborn's Lament

BY JOHN WARDEN

In 1907 after climbing Mount Sir Donald in British Columbia, Frank W. Freeborn, a mountain climber and charter member of the Alpine Club of Canada, articulated a problem that many nature photographers face:

*"I tried to catch the scene with my camera, but the result is only a faint suggestion of the majesty and beauty of the original."*

Freeborn was right. Majesty is not a simple aesthetic quality. It's one of those emotional responses

that come to us intuitively. We know it when we see it, but to artistically capture and convey majesty is a much more difficult undertaking.

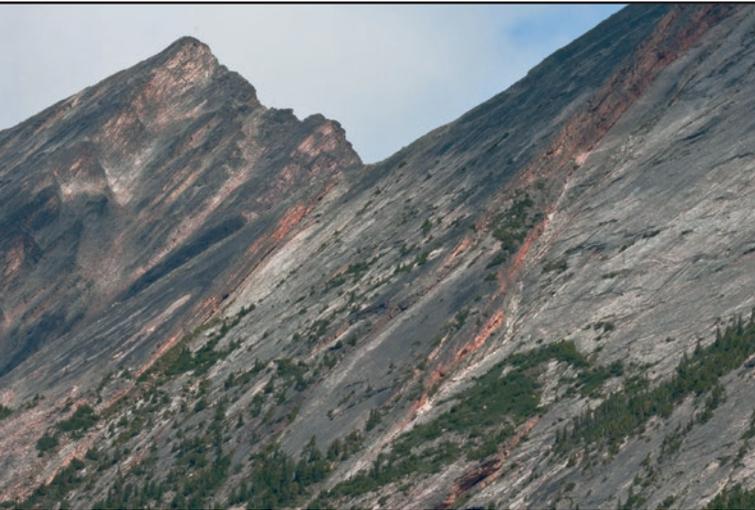
My response to Freeborn's lament was to take on majesty as a project and, like the jigsaw puzzles of mountain scenery that my Mother so enjoyed, examine each of the pieces to see where they fit and how they contribute to the finished picture. For help, I turned to another mountain climber, Arthur P. Coleman.

Coleman was also a founding member of the Alpine Club of Canada and in 1910 became the club's second president. A professor of geology at the University of Toronto, he was a climber who made the first ascent of Castle Mountain near Banff in 1884. Coleman was also a writer, a photographer and an artist. As noted by author David P. Silcox:

*"Painting was, for [Coleman], both a poetic and a descriptive pursuit, a way of wrapping an artistic expression around a phenomenon he was interested in or moved by."*

**ENGULFED BY THE MOUNTAINS AT MORaine LAKE.**

JOHN WARDEN



**LET THE MOUNTAINS BE AS TALL AS POSSIBLE.** JOHN WARDEN

Majesty, for sure, is an artistic expression and Coleman, who made eight expeditions into the Rockies, was definitely moved by mountains. On the 31st of July 1908, having left from Edmonton for his second attempt at summiting Mount Robson, he and his expedition approached the mountains. From Coleman's book, *The Canadian Rockies: New and Old Trails*, we get our first clue:

*"Then came the imposing portal of limestone cliffs and once more the majesty of the mountains engulfed us, the huge block of Roche Miette overshadowing us for half a day."*

Here, close to home, on the eastern slopes of the Rockies, we can begin putting our picture together. To go beyond a snap shot or selfie and dip our toes into the artistic realm of the majestic, we start with a sense of being engulfed by the mountains. Mountains tower and loom over us. They have a high view and Coleman's descriptions from his climbing expeditions give us that sense:

*"Lifting their heads serenely among drifting clouds, [the mountains] give one a poignant feeling of the difference between man's world and God's. Here was purity and measureless peace. Here one might think high thoughts."*

*"The highest point of the mountain rose in sheer cliffs above a very wild valley. [...] From our perch on the rocks there was a magnificent view of the central Rockies, including the Columbia Icefields."*

Mountains in the distance are nice. Certainly, they can be scenic. When we're IN the mountains

though, surrounded and engulfed by them, then we begin to experience majesty. But how can we artistically convey this towering, high view aspect of majesty? Let the mountains be as tall as possible. Compose the photograph so that the top of the mountain or highest point of interest is at the very top of the image frame or, by showing only part of the mountain, imply that it towers even beyond the top of the frame.

A high view, though, is not the only piece of the puzzle that is majesty. Coleman's description of Roche Miette as "a huge block that overshadows them for half the day" offers another



**SHOWING ONLY PART OF THE MOUNTAIN IMPLIES THAT IT TOWERS EVEN BEYOND THE TOP OF THE FRAME.** JOHN WARDEN



**HE WAS HUGE, WITH A MASSIVE HEAD, MADE EVEN LARGER BY HIS HEAVY COAT OF WINTER HAIR.** JOHN WARDEN

clue. Size, bulk and massiveness are also contributing factors. Mount Robson is a particularly good example. Seen from the west on the Yellowhead Highway, Robson is a huge and massive mountain that is awesome in its majesty.

Capturing that size, though, can become an obstacle to appreciating and artistically expressing the quality of majesty. One of the compositional techniques that can help with that problem is scale i.e. portraying comparatively, the size of a mountain. Coleman, like many photographers and painters effected scale by positioning a tree in the foreground of his canvas or print, thereby allowing us to judge from the relative size of the tree the mass of the mountain looming over and around it.

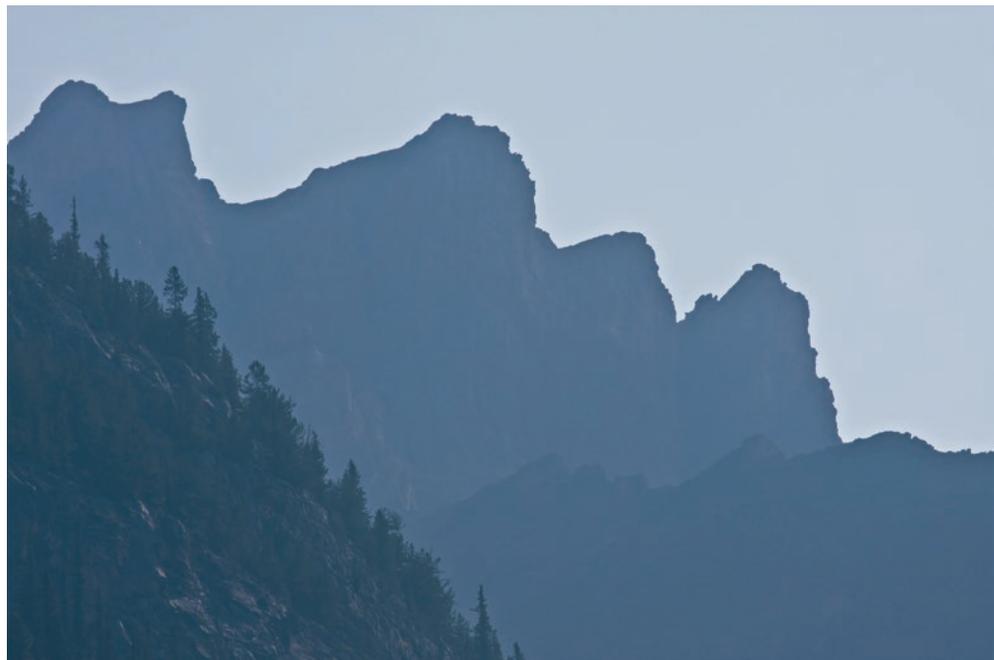
My own experience using scale might help to illustrate this concept. I remember seeing a big

bull bison in winter at Elk Island National Park. He was huge, with a massive head, made even larger by his heavy coat of winter hair. Frost and snow covered his face and I could see his warm

breath in the frosty air. Wow! This guy is majestic I thought to myself. And indeed, he is as you can see from the photograph. His size in the image though, is amplified by the contrasting scale of the plants in front of his face. And such is the case with mountains. Add a tree, a person, or wildlife to our mountain images, anything from which size can be inferred and instantly, we create scale. In doing so, we also begin to interact with the image.

Bison have provided me with another critical characteristic of majesty, that of power. Bison in general are big and powerful and the bull I saw that winter was a juggernaut. I could see the light in his eyes and his frosty breath as he ploughed through the deep snow. From these cues, the bison's power was visceral. That same feeling of bone-deep power is found in Arthur Coleman's evocative mountain descriptions of tumbling glaciers, precipitous slopes, and sheer walls of ice. And when Coleman fell through the snow into a deep crevasse and was saved only by his ice axe, he experienced firsthand the dangers posed by the powerful forces at work in the mountains.

**LINES ARE ANOTHER EFFECTIVE COMPOSITIONAL TOOL THAT CAN CONVEY POWER.** JOHN WARDEN





**MOUNTAIN LIGHT AND THE INTERPLAY OF LIGHT AND SHADOW, COLOUR AND CLOUD.**

JOHN WARDEN

How then can we, without falling into a crevasse ourselves, artistically express the power of mountains? We go back to the basics of composition and an understanding of the psychological significance of shape and form. Shapes are a basic element of design and are used to convey meaning. In any photograph or artwork, shapes and forms speak to us in the language of power. Triangles, like the triangular shape of my bison's head or the triangular shape of mountains, add a dynamic tension and energy to an image. Squares and rectangles, on the other hand, communicate solid stability. Even implied shapes bring energy and life to a photograph and the result is a more powerful image.

Lines are another effective compositional tool that can convey power. The severe, angled, and jagged lines seen in towering cliffs and precipitous slopes can be isolated, emphasized and exaggerated in a composition by the choice of point of view. The greater the

angle of point of view, the more powerful the feeling we derive from lines.

Symbols are also a useful technique in photography for conveying power. If we go back to my bison image as an example, his weary winter face, covered in frost, ice and snow, speaks to us of the power of

survival. He represents an enduring capacity to overcome the cold, the winter and the seasons. Snow and ice can also represent the slow and powerful grinding force of glaciers.

To see all of these power-related compositional features though, we need illumination, the interplay of light and shadow, colour and cloud. Coleman wrote of how "blue and purple shadows began to creep from point to point, till all was soft and ethereal" and it is in this kind of interplay that the mountains begin to come to life. Soft light, diffused by cloud and mist, gives us a sense of the breath of the mountains and when something as massive as mountains or bison are breathing, they exude power. Dark colors add a taste of foreboding danger and hard light like that of mountain alpenglow adds fire and vitality to our subjects.

Hard light also reveals textures which compositionally convey age, the last of the four characteristics of majesty. A young bison is not likely to be

**"FROM OUR PERCH ON THE ROCKS THERE WAS A MAGNIFICENT VIEW OF THE CENTRAL ROCKIES, INCLUDING THE COLUMBIA ICEFIELDS." – ARTHUR COLEMAN. JOHN WARDEN**





**VEINS AND STRIATIONS HAVE ETCHED THE MOUNTAIN'S ROCK FACE, EXPOSING AN AGED AND ANCIENT COUNTEenance.** JOHN WARDEN

considered majestic, whereas an old, wise and powerful bull, may well be. Texture is a major component in my photograph of the bison and that texture greatly adds to the feeling of age and therefore majesty.

Another example of age can be found by the east park gates in Jasper. There is a mountain there whose veins and striations have etched its rock face, exposing an aged and ancient countenance.

A similar sense of age can be felt in the furrowed lines and heavily textured bark of old trees. Age, like the symbolic power of snow and ice, talks to us of an enduring capacity to withstand the ravages of time.

Frank Freeborn set out the problem and Arthur Coleman helped us to discover the four corner pieces of our jigsaw puzzle, a high view, size, power and age. Using the tools of visual

design and composition we can now, with a new heightened awareness, pull the pieces of our puzzle together, building, layer on layer, an image of our feelings for majesty. Will the result be more than a shallow suggestion of the original? That's why we're on a vision quest. Go! Majesty, solitude and wonder are there for those who search.

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Author's Note: As part of my analysis of this project, I created a crosstab checklist, which I'm happy to share with you below. If you think I've missed something though, let me know at: [jwarden@telus.net](mailto:jwarden@telus.net).

	A HIGH VIEW		SIZE	POWER						AGE	
	Top of Frame	Looming and Towering	Scale	Shape or Form	Hard Light	Soft Light	Color	Symbols	Strong Severe Lines	Furrowed Lines	Texture
<input type="checkbox"/> Mountains	Required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Bison		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Trees		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Clouds		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Check out John Warden's updated website: [www.jwardenphotography.com](http://www.jwardenphotography.com), with a new look and many photographs. Plus, also on the site are his past *Nature Alberta* articles.

[www.jwardenphotography.com](http://www.jwardenphotography.com)



# Eyes on IBAs

## A Birder's-Eye View on Cooperation and Conservation

BY BROOK SKAGEN, NATURE ALBERTA IBA INTERN

*As an Important Bird Areas (IBAs) intern this past summer, I have had the rewarding opportunity to explore the prairies of my home region in greater detail, as well as expand my knowledge about the unique avian species that call it home.*

I have traversed through native grasslands and scaled coulees thousands of years old in an attempt to survey the hundreds of bird species found throughout the province's IBAs. But to my surprise, it was amidst a popular southeastern Alberta campground and recreational area that I

witnessed the highest diversity of birds during the year.

Located just 7 km south of Brooks in the mixedgrass subregion, Lake Newell is a massive IBA (spanning 115 km<sup>2</sup>) encompassing the large, mildly-eutrophic lake and the numerous islands found

within the water body; Rolling Hills Reservoir, Kitsim Reservoir, and Kinbrook Island Provincial Park are also included within the IBA. Ease of public access and bountiful marshlands make Kinbrook Island a local birding

LAKE NEWELL SCENERY; JULY 2, 2014. BROOK SKAGEN





**CLIFF SWALLOWS ON BARBED WIRE OVERLOOKING LAKE NEWELL; MAY 27, 2014. BROOK SKAGEN**

hot-spot, as well as providing protection to birds which fall in its boundary. However, Lake Newell is also heavily utilized for recreational fishing and boating, and significant rural and industrial development has occurred in the surrounding prairie; the IBA is vulnerable to potential and ongoing conservation threats.

Despite these ongoing environmental pressures, bounties of birds can be spotted along the shores of Lake Newell's extensive marshlands. The lake is managed by the Eastern Irrigation District (EID), which utilizes water diverted from the Bow River for irrigating the surrounding agricultural land. Recognizing the water body's importance for both the environment and agriculture, the EID (in partnership with Ducks Unlimited Canada and

Alberta Fish and Wildlife Division) has created and maintained a series of marked inclusive wildlife viewing trails within the Kinbrook Marsh; the area has been designated as a North American Waterfowl Management Plan

Project. Years later the trails and viewing platforms of Kinbrook Marsh are still wonderfully maintained, allowing the public to learn more about Lake Newell's many avian visitors while hiking alongside forests of cattails and meadows of beautiful prairie flowers.

I have always found birding Lake Newell to be a rich and rewarding experience; congregations of American White Pelicans, Double-crested Cormorants, and gulls are regularly seen bobbing throughout the water, while Killdeer, Wilson's Snipe, and other chatty shorebirds scurry along the marsh's edge. The soothing call of the Common Loon can be heard resonating in the crisp morning air, while willows bustle with the sweet melodies of warblers, wrens, and vireos of varying species. I was surprised to find that such



**A SAVANNAH SPARROW AT LAKE NEWELL; MAY 12, 2014. BROOK SKAGEN**

vibrant life could be found within an excellently maintained campground, waiting to be discovered by current and future generations alike.

Despite the negative stigma surrounding the region's environmental wellbeing, there are still ecological areas in Southeastern Alberta teeming with life. With each new development, whether rural, industrial, or recreational in nature, the power of discussion and cooperation between stakeholders and the community can be the difference between a substantial loss of habitat and the creation of one of the province's most critically Important Bird Areas. I highly recommend the Lake Newell IBA to the avid birders, campfire enthusiasts and anyone with an



interest in the great outdoors. So the next time the early morning calls of charismatic robins or geese on the move awaken you, look to the prairies for your next birding adventure; I look forward to bumping into you at the marsh!

Happy Birding!

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## FEATURE ARTICLE

# Bats in your Hair and Other Wildlife Myths and Misconceptions

LORNE FITCH, P. BIOL.

*We've come a long way from the time of Aristotle who believed swallows and other birds hibernated beneath the mud in marshes and others who thought migratory birds flew to the moon and there spent the winter. But we aren't quite free of such notions.*

A short list of current myths and misconceptions about wildlife include the following:

- Bats are blind and if they fly too close they get tangled in your hair.
- Wolves and coyotes howl at the moon.
- Hummingbirds migrate on the backs of Canada geese.
- A lady bug's spots tell its age.
- Snow buntings are sparrows that turn white in the winter.
- Pike lose their teeth in the spring.
- Spiders sneak into our beds at night to bite us.
- Birds bang into windows to seek shelter indoors.

- Deer only cross roads at wildlife crossing signs.

These are humorous, even silly, misunderstandings and ignorance about wildlife. To a degree these are innocuous items that might not seem harmful to wildlife compared to the two fundamental myths that are harmful.

The first is that resources are inexhaustible. The second is we can do everything, everywhere, any time and all the time. These two myths underpin many of our land use decisions. They have, to a major degree, become public and political realities, even though they are fiction. They aren't real but the fiction becomes compelling because it sustains our economic systems.

Not necessarily a myth but a misconception is that wildlife is represented by the big, the furry,

the feathered, the charismatic, the pretty, the pursued or the photogenic. This gives short shrift to plants, fish, amphibians and invertebrates, indeed most of the species that describe biodiversity fully. In fact, compared to numbers of insect species everything else is just rounding error.

The conundrum of too little land and too many expectations for the land base isn't a new one but the issues faced in Alberta bring this into focus. With the discussion come all the old fairy tales, fables, fantasy, legend and myth, along with partial truths, half truths and untruths. Inevitably it will come down to ecological awareness and the courage to make decisions in the face of conflicting and overlapping aspirations. Ogden Nash said once, "Progress may have been alright once, but it has gone on too long." With progress and all its benefits have come costs; one of the evident costs, with changes in landscapes, has been declines and losses of fish and wildlife, our biodiversity treasure.



*Lorne Fitch is a Professional Biologist, a retired Fish and Wildlife Biologist and a past Adjunct Professor with the University of Calgary.*

Adverse impacts on wildlife from land use can be categorized as follows (taken from Wyoming Game and Fish Department):

1. Direct loss of habitat
2. Physiological stress and behavioral shifts
3. Disturbance and displacement of wildlife
4. Habitat fragmentation and isolation
5. Alteration of ecological functions and process
6. Introduction of competitive, predatory or parasitic organisms
7. Secondary and cumulative effects from increased access and additional development

The impacts are real, based on research, evaluation and empirical evidence. But, facts have a hard time getting traction on a roadway paved with myth and misconception. J. B. MacKinnon writes:

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*“Denial is the last line of defense against memory. It helps us to forget what we’d rather not remember, and then to forget that we have forgotten it, and then to resist the temptation to remember... It fulfills... our need to be innocent of a troubling experience.”*

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There are several misconceptions about the impacts of development on wildlife and the responses of wildlife to human disturbance that need to be addressed:

**1 WILDLIFE JUST MOVES OUT OF THE WAY. THERE IS NO IMPACT BECAUSE WILDLIFE RELOCATES TO UNAFFECTED, ADJACENT HABITATS.**

This contradicts a fundamental axiom of population ecology. Populations of organisms increase to fill vacant, suitable habitat and then are regulated by the essential component of their habitat that is in the least supply. Examples of essential components would include winter range for ungulates, breeding, nesting and brood rearing areas for grassland birds and spawning areas for native trout.

Existing populations of wildlife occupy the habitats that are suitable; areas that are unsuitable are not used, or are used infrequently. When development displaces animals from suitable habitats they are forced to use marginal habitats (that do not meet all of their life cycle requirements) or, they relocate to unaffected habitats where population density and competition for resources with an existing population increases.

Consequences of displacement, competition and reduced habitat are lower survival, lower reproductive success, lower recruitment and lower carrying capacity. All lead to population level impacts.

Unlike us, who have developed technologies to live in many places, many wildlife species have evolved to be reliant on specific habitats.

In the process they might have sacrificed other options, and have accepted being profoundly linked to a particular landscape.

We forget, as we fiddle with the thermostat and wonder whether dinner will be roast beef or a pizza, that a wildlife species lives (or dies) with the immediacy of its habitat. There’s no take out on the wildlife speed dial. What wildlife species have done is rolled the storms, the floods, the droughts, the changes in water temperature, the good and the bad – the natural variability of their world – into their genetic material as a mechanism for survival. Unlike us they are fine tuned to the intricacies of their world and are on intimate terms with all the nuances.

**2 ANIMALS SEEN NEAR DEVELOPMENTS INDICATE THEY HAVE BECOME ACCUSTOMED TO AND ARE NOT AFFECTED BY ACTIVITY.**

Individuals within populations show variable responses and tolerances to disturbance. Some animals may acclimate or modify behavior in response to repetitious, non-threatening or low grade activity. Some species have adapted to human activity; however, none are in the species at risk category. Some species are habitat generalists and are not as affected by disturbance as other species.

However, other segments of the population may remain very sensitive to disturbance. This is particularly true of habitat specialists, which includes all of the species at risk. The health of the overall animal population depends on the ability of all segments of the population to effectively use, and have access to limited resources.

Displacement is not necessarily evident if some animals remain visible from an area subject to disturbance or human activity. Presence of animals does not indicate that the animals are subject to no negative effects; physiological stress may not be apparent.

**3 SEASONAL USE STIPULATIONS, HABITAT PROTECTION GUIDELINES, STANDARD OPERATING PROCEDURES AND RECLAMATION PRACTICES ARE ADEQUATE MITIGATION FOR WILDLIFE RESOURCES AFFECTED BY DEVELOPMENT.**

“Standard operating conditions” have not been researched or reviewed to determine efficacy at the stated objectives, especially at regional and local scales. Random reviews show significant rates of non-compliance with standard operating conditions; oversight is lacking. Guidelines for development are usually minimal requirements based on economic/political compromise, and subject to negotiation. Much of this attempt to mitigate the negative effects fails to account for cumulative effects, the additive feature of land use activities and footprints.

Reclamation occurs at a much slower pace than that of development and there is a significant backlog that adds to the cumulative footprint. The ability to restore land use footprints to a comparable, pre-disturbance habitat function is inexact and problematic.

Research on the efficacy of mitigation is lacking and typical procedures are repeated without an empirical base to determine adaptive management and rates of success. At larger scales many species at risk continue to decline in the face of an increasing development footprint, even with the application of a variety of administrative protection guidelines.

Mitigation has become one of those aggrandizing bureaucratic terms that assigns a human intent to compensate for a loss, without a clear statement about how the bargain will be struck. Mitigation is politically sound, but ecologically risky. Mitigation might be thought about in the same way that technological solutions are employed in smoking, ostensibly to reduce the health risk but really to maintain consumption rates. The use of filtered cigarettes precisely fits this thinking. The tobacco company tries to solve a problem in a way that lets consumption of the drug continue without interruption.

Mitigation addiction is the affliction created in the vain hope we can continue to do

everything, everywhere, anytime and all the time, with our development footprint effectively erased behind us. At worst it creates the impression there is still room for expansion of development and biodiversity is protected.

**4 THE AMOUNT OF PHYSICAL DISTURBANCE IS SMALL IN COMPARISON TO THE LAND BASE AND THE IMPACTS TO WILDLIFE ARE EQUIVALENT TO THE AREA AFFECTED.**

The collective area of directly disturbed land may be small in relation to the land base, but the influence of the footprint and activity extends to a larger area where proximity causes stress, avoidance, increased mortality and decreased use. Call this the collateral damage of a land use activity. Avoidance and stress response impairs remaining habitat function by reducing the capability of wildlife to use habitat effectively. These impacts are especially problematic when they occur in or adjacent to limiting habitats such as critical winter ranges, hibernaculums and reproductive habitats.

There are varying degrees of avoidance, effects and stress responses to sources of human noise and activity. These responses include reactions to humans on foot, to vehicles, ATVs, equipment, roads, noise levels, timing of activity and seasonal differences. An impact is defined as the impairment of the function of important wildlife habitat in ways that are discernable, increasing or substantial, even though animals may still be present.

The thresholds start at the outer limits where a reaction or an impact on wildlife is undetected,

undetected or there is no negative response. Between the outer limit and the disturbance is an increasing suite of reactions, responses and effects on wildlife that represent a loss of habitat function and effectiveness. There is a gradient within this “buffer zone” and no explicit line beyond which it can be said wildlife populations are protected and there is no population level effect. Within a buffer zone, in proximity to the disturbance is found increasing avoidance, displacement and physiological stress.

For grassland songbirds, effects can manifest themselves as failure to secure breeding territory, nest failure/predation/parasitism and higher rates of mortality with less recruitment to the population. For species at risk, already at diminished numbers, this has a cascading effect.

**5 KNOWLEDGE ABOUT THE EXACT LOCATION OF THRESHOLDS OF CHANGE IS INSUFFICIENT SO APPLYING THEM NOW IS UNWARRANTED.**

It is difficult to pin down in exact terms when and where the last wild animal will die as a consequence of land use and the effects on population integrity. What the last animal dying represents is exact precision and a failure to apply a threshold early enough to stave off their demise.

History does provide a mirror to view the list of extirpated and now extinct species whose populations developed a negative trend in the face of human intervention. History tells us that

yesterday’s abundant species can become today’s imperiled ones. The use of trend information, especially for species at risk, is a useful distant early warning alarm about the effects on land use on populations and on intervention to avert population collapse. This speaks to adopting the precautionary principle that should guide targets and limits as research and monitoring fine tune the lines that define thresholds.

**6 WILDLIFE POPULATIONS DO NOT SEEM TO RESPOND QUICKLY TO LAND USE — THEY PERSIST— AND THAT SUGGESTS PROTECTIVE MEASURES ARE UNNECESSARY.**

The line of reasoning is if changes aren’t observed in the short term, the effects are minimal and irrelevant to species protection. The conclusion might be that animals adapt quickly and positively to changes. The challenge is that many species react to changes in landscape structure and to disturbances with long response times. Current population densities may not reflect a response to current patterns of land use, but to earlier changes decades ago. Populations may continue to decline even when the degree of landscape change does not increase. Negative impacts of landscape change (habitat fragmentation, plant species shifts, loss of connectivity and habitat loss) only become apparent after lengthy time periods. Further population effects (and losses) will be incurred in the future as a result of the changes that took place in the past.

**7 IF SOME SPECIES ARE DOING WELL IN OTHER JURISDICTIONS IT IS UNNECESSARY TO PROTECT THEM IN ALBERTA.**

There seems to be a tacit assumption and rationalization that if these species survive elsewhere that is good enough. This assumes the level of concern and protection in other jurisdictions is sufficient to maintain these populations over the long term.

The line of reasoning sometimes follows this — species at risk are often on the edge of their geographic range and this portion of the population is not important. However, outliers are key to population persistence, given things like climate shifts. This argument ignores the possible genetic adaptations that are particular to Alberta and what that provides as a long term survival strategy for the population.

In the maintenance of imperiled (and other) wildlife populations we should treat borders as the administrative lines they represent, not as range boundaries. Aldo Leopold spoke eloquently about the fallacy of thinking that someone else will protect imperiled species when he said: “Relegating grizzlies to Alaska is about relegating happiness to heaven; one may never get there.”

**8 WILDLIFE IS ABUNDANT; HOW COULD BIODIVERSITY BE DECLINING?**

Biodiversity isn’t simply about numbers of commonly seen wildlife species. Abundant population sizes of Canada Geese, Mule Deer or American Robins do not signal that biodiversity maintenance is being achieved. Nor does an influx of English Sparrows, European Starlings, Brook Trout, Crested Wheatgrass or pansies indicate we can compensate for lost native

wildlife or plants by substituting exotic, non-native species.

Some wildlife species can co-exist with us, even in urban settings and on landscapes largely used up for our economic pursuits. But, those generalist species do not indicate the full suite of biodiversity maintenance, nor are they indicators of healthy, intact landscapes.

Wildlife may only seem “abundant” in the limited context of our memory span. Present wildlife diversity, abundance and distribution may not equate to past conditions. The shift, the losses of spaces and species, occurs beyond our awareness and reckoning. This is the phenomena of “shifting benchmarks”. We think the landscape and resources of today is the “full pie”. It’s part of our combined arrogance and ignorance. The reality is today’s pie is a mere slice of yesterday’s pie. And so it goes; without an appreciation of the progressive thinning of the remaining slice, the pie can, and does, eventually wink out of existence.

### **9 ABSENCE OF WILDLIFE MEANS NO WILDLIFE USE.**

If we don’t see wildlife it must mean the area has little importance for wildlife. Failure to observe wildlife does not equate to wildlife absence. During the controversy over the proposed drilling of sour gas wells in the Whaleback some 20 years ago the Minister of Energy took a helicopter tour of the elk winter range, saw no elk and concluded there were no wildlife issues. The flight was in August,

not the best of times to survey ungulate winter range.

Not all habitats are created equal, are equally used year-round or between years, are equally distributed, or are equally critical. However, all habitats have to be present to ensure species survival over the range of variability. All habitats have to be connected to ensure species survival over the long term. Redundancy is important and shouldn’t be viewed as surplus to a species needs, or to ours.

### **10 MY ACTIONS AREN’T A RISK TO WILDLIFE; IT’S THE ACTIVITIES OF OTHERS**

The reasoning includes arguments like: I don’t hunt, fish, watch birds, visit parks or care about polar bears and tropical rainforests. I don’t kill wildlife (or much of it) or cause it any problems. The links between wildlife and personal choices to maintain wildlife have still not occurred in a major way. I would remind you of the recent Cows and Fish survey that found almost no respondents felt they had any impact on fish and fish habitat. So, no one who flushes a toilet, flips on a light switch or lives in a home made of wood has any impact on fish. How do you spell “disassociative”?

Our settlement patterns, economic activities, transportation networks, recreational activities and our homes have a footprint overlain on landscapes that have, or had, value to wildlife species. Even without direct mortality we reduce or remove the productive capacity of the landscape for many species. The result is indirect mortality and a loss of biodiversity. ■

The list of myths could be longer but the issues raised are in no small way related to our general lack of ecological literacy. Survey after survey demonstrates the value of environmental awareness and education in public support for environmental programs and actions. Yet, Alberta’s ecological IQ still seems too low to achieve progress on many species and spaces, especially the imperiled ones. Indeed it may be too low to keep other creatures off the lists of the damned. We need a short course in ecosystem awareness, an Ecology 101, at all levels; individual, corporate, agency and political. The curriculum might include the following elements, to get us to a higher plane of understanding and better decision making:

### **LANDSCAPE INTEGRITY IS THE KEY TO SUSTAINING BIODIVERSITY.**

Maintaining native vegetation diversity, heterogeneity and structural attributes is one of the elements. To accomplish this requires disturbance regimes within the range of natural variation; this recognizes that fire, flood, drought and grazing have built many of the landscape features and created the opportunities for plants and animals to survive and thrive. This implies change is necessary and desirable, within a dynamic equilibrium, to keep options available.

In one respect, we humans crave stability, which is contrary to the habitat needs of many species. Alternately, our footprint and

activities increase the range of variability beyond what is natural. Dividing up the landscape into smaller and smaller pieces results in some species failing to find what they need for their life cycle requirements. Species can't cope and evolve fast enough to survive the new landscape order and the new normal. We need to keep the pieces, keep the connectors, and connect the pieces.

#### **SCALE IS IMPORTANT.**

While we think big about our developments we are small thinkers about the one attribute that maintains many species, that of big space. Landscape integrity occurs at both temporal and spatial scales. Creatures needing big space that is currently truncated by all of our development zeal can't wait for us to finish and move on, hence our need to think both in time and in space. Connectivity, the requirement to move easily and safely between habitats, occurs at different scales (local, regional, provincial, national and global) and implies a much higher level of human cooperation than we currently display.

#### **THERE ARE LIMITS AND THRESHOLDS.**

This is surely the hardest one for us to grasp, with our unrealistic expectations, recurrent frontier mentality and the irrational belief that technology will continually nudge the threshold further away.

The reality is there is a minimum viable population and habitat size for species; we can't change those rules. Fragmentation, through our roads, pipelines and other linear

disturbances results in habitats of decreasing size, value and utility. Cumulative effects are crucial to measure and model. Modeling, a surrogate for reality, is, nonetheless important, because we don't want to turn everything we want to do into an experiment with the high risk of failure. Monitoring, over space and time, is a key tool for determining status, trends and failures.

We need to use both tools, cumulative effects modeling and monitoring to evolve to a more effective ecological accounting practice that aids our decision making capability. Currently it seems we base decisions more on coin tosses than on science and predictability.

#### **A POPULATION IS ONLY AS SAFE AS ITS WEAKEST LINK.**

The identification of limiting factors and ecological bottlenecks is in its infancy for many species. The acquisition, the discovery in many cases of that crucial knowledge seems imperative if we are to predict effects on species of our development. Below certain critical thresholds species are at risk from variations in habitat or from influences from other sources (i.e. weather, predation, disease, human caused mortality). Prudent management of species entrusted to our care implies we know enough to at least cause no more harm.

#### **KEEP BOTH ECOSYSTEM DRIVERS AND PASSENGERS.**

Drivers can be keystone species like beavers, predators, pollinators or recyclers. Drivers can occur at the community level also.

Think of riparian areas, native plants, litter, and wood in stream environments. Ecological processes are drivers; fire, drought, herbivory and floods periodically reset the biological clock.

Of course we still don't know all of the drivers of the system, even though we are mounting unintentional experiments with no monitoring, which could be eliminating some. We don't want to get into thinking that many of the passengers are redundant to ecosystem function. There is a web of interaction and interdependence that can't be discounted. And of course, bad driving by humans can affect all of the passengers, including us; we can fall in both categories either spatially or temporally.

This suggests one of the fundamentally important jobs of biologists and conservationists is to develop some level of ecological literacy and create a constituency that knows and cares. Very simply, human decisions can have a disproportionately greater impact by changing, sometimes irreversibly, the playing field, and the dynamic equilibrium of the ecosystem is thrown off by the additive effects of our actions. All of this is important, as a bureaucrat once said to me, "For those who live in the environment". I'm assuming he meant all of us since I can't think of anyone living outside the environment. Maybe some think they do and they are magically immune to the changes affecting the rest of us.

Creating awareness of ecosystem functions, processes and relevance to humans is the first step to attitudinal and behavioral shifts at individual and community levels. Then we may see, through the process of osmosis some policy creation at political and corporate levels. Who knows, it may catch on and the circle could expand to move awareness to national and global levels.

Wendell Berry, the farmer/philosopher captured this intent and exposed a fundamental myth with:

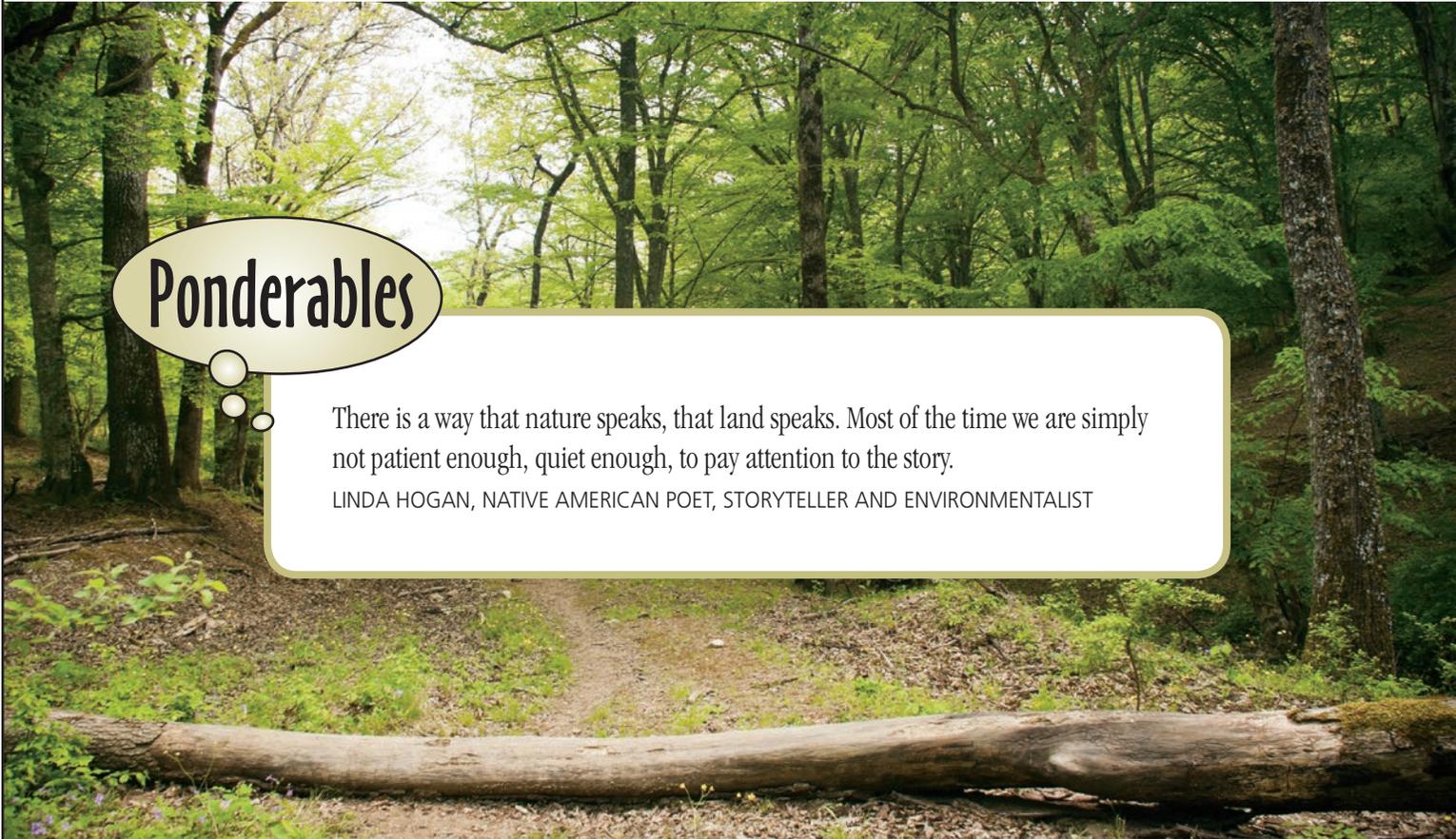
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*“We have lived our lives by the assumption that what was good for us would be good for the world. We have been wrong. We must change our lives so that it will be possible to live by the contrary assumption, that what is good for the world will be good for us. And that requires that we make the effort to know the world and learn what is good for it.”*

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Wildlife (the full expression of biodiversity) form part of our stories, our history, our lives, our landscapes; they are also a measuring stick of the health of our world. We define ourselves by the same landscapes, the same sense of space and the same diversity of areas as do wildlife. They can slip to become only a part of our memory and worse - we forget them altogether.

The last myth is we can do without biodiversity and the intact landscapes that support wildlife. We think we have broken free of our ecological constraints but the reality remains those relationships endure and simultaneously place us within the land and embed the land within us. We might consider moving more slowly on the landscape, with a greater sense of humility and being more mindful of our fellow travelers.



## Ponderables

There is a way that nature speaks, that land speaks. Most of the time we are simply not patient enough, quiet enough, to pay attention to the story.

LINDA HOGAN, NATIVE AMERICAN POET, STORYTELLER AND ENVIRONMENTALIST

*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!*

# Nature Diary: Flying Squirrel

BY DEBBIE AND ALAN GODKIN

*Sometimes my being a night hawk has afforded me the opportunity to catch a glimpse of nature I might otherwise miss.*

Such was the case in the wee hours one snowy night, when from my living room window, I saw what I thought was a Red Squirrel. It streaked down the poplar branch and jumped onto the bird feeder. Since when do Red Squirrels feed at night?

I reached for the binoculars and immediately realized that I was looking at a Flying Squirrel for the first time. I watched it as it shelled and ate the sunflowers with amazing speed for about two minutes, and then in a flash it was gone. I spotted it at the feeder on

several occasions over the winter, usually after midnight.

That first sighting was in 2003 and since then we have had not one, but two Flying Squirrels at the feeder at the same time, for two ('05 and '06) winters in a row.

DEBBIE AND ALAN GODKIN





DR. SHARIF GALAL



DR. SHARIF GALAL

# First Hand: The Great Gray Owl... and a little bird!

BY DR. SHARIF GALAL

*The Great Gray Owl (Strix nebulosa) is one of the largest and tallest owls in the world; it is the second largest after the Eurasian Eagle Owl (Bubo bubo).*

Because of its feathers, it appears huge and bulky but it has relatively long wings, tail and large head. A Great Gray Owl can be identified by its round head without ear tufts, big rounded yellow eyes and the large grey body. It typically measures 61 to 84 cm in length (24 to 33 in.). While it is the largest owl species in North America, it is really just a ball of feathers; the Great Horned Owl (*Bubo virginianus*) is still the heaviest. The average weight of the Great Gray Owl ranges between 1 to 1½ kg (2 to 3 lbs).

The Great Gray Owl is known for its still-hunting technique

in which the bird sits and listens for its prey, then swoops down for the kill by snatching it with its talons. It tends to fly for short distances and only six feet off the ground, listening to any movement of its prey. Thanks to its excellent hearing, it can hear very small rodents even when they move in tunnels beneath snow in the dark.

Great Gray Owls are known to be very defensive when they have owlets in the nest. The female does all of the incubating and the male does all of the hunting. Both will defend the nest if they feel threatened, even defending against animals as large as badgers, coyotes and bears.

On the other hand, the Red-winged Blackbird, (*Agelaius phoeniceus*), is found in most of North America, especially the prairies of Alberta, Saskatchewan, Manitoba and Midwest states of the US. It feeds mainly on seeds and insects. The Red-winged Blackbird can be very aggressive while defending its territory from other animals and birds. It will attack much larger birds, such as crows, ravens, magpies, birds of prey and owls if they enter. Although relatively rare, there are some reported cases of Red-winged Blackbirds attacking humans who were on their territories during mating.



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DR. SHARIF GALAL

I have seen them several times attacking ravens and hawks but never attacking owls except the day I took the photos, near Bragg Creek. I photographed this male Great Gray Owl when he was approaching a Red-winged Blackbird's nest. Suddenly, the blackbird attacked him from behind, forcing him to fly away from the nest and chicks. The little bird went ballistic and was very brave, determined to save its family. I have never seen something like this in my life. The owl flew away trying to save himself from the blackbird's repeated attacks. The blackbird was a living missile!

In fact I was roaming the prairies around Calgary looking for this kind of owl for almost two years until I got a chance to photograph not only the owl but the whole story. This is one of the most touching moments I have seen during fifteen years of photography. How a little bird can turn into an angry monster to the point that it will force an owl almost 20 times its size to run away for its life!

#### References

Wayne Lynch 2007 .Owls of the United States and Canada: A Complete Guide to Their Biology and Behavior. Johns Hopkins University Press; 1st edition.

In some areas, the Great Gray Owl (or Great Grey Owl) is also called Phantom of the North, cinereous owl, spectral owl, Lapland owl, spruce owl, bearded owl, and sooty owl. It is Manitoba's provincial bird.

Bull, E. L. and J. R. Duncan. 1993. Great Gray Owl. The Birds of North America. The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union. <http://beautyofbirds.com/redwingedblackbirds.html>

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.

## BOOK REVIEW

# The Reindeer Botanist: Alf Erling Porsild, 1901-1977

REVIEWED BY GEORGE W. SCOTTER

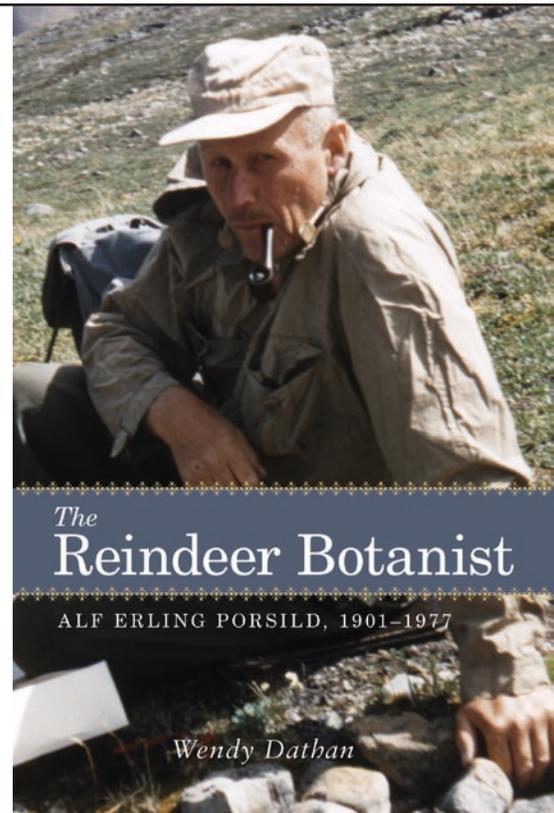
This long-awaited biography of Alf Erling Porsild, written by Wendy Dathan, provides the reader with a detailed understanding of the life of an eminent Arctic botanist. Erling's (his preferred name) path from a young Dane living in Greenland to serving as curator of botany at the National Herbarium of Canada and becoming a botanist of international stature is detailed. The book is divided into three parts, each dealing with a different period of Erling's career. Each part could have been a book on its own.

## REINDEER SURVEY / EXPLORATION, 1901-1928

An accomplished botanist, Dr. Morten Porsild, the father to Robert Thorbjorn (Bob) and Erling, moved to Disko Island, Greenland as the director of the first research station above the Arctic Circle. The brothers were encouraged to collect plants and were rewarded with cash, the amount determined by the importance of the collection. Thoroughly trained by their father, both sons assisted him on botanical collecting trips to West Greenland. As young men they had considerable botanical knowledge and experience travelling in northern settings. In addition, they had the opportunity to meet scientists at the station and often in their parents' home.

The government of Canada was anxious to establish a herd of reindeer in the North to supplement the dwindling wildlife resources and to lay the foundation for an industry intended to improve the economic opportunities of the indigenous population on the Mackenzie Delta. The influx of traders and the introduction of firearms to the Arctic had seriously reduced the herds of barren-ground caribou that formed the basis of subsistence for the indigenous people. A Royal Commission report (Rutherford et al. 1922) recommended that small experimental reindeer herds be established in several places. Thus in April 1926, Erling Porsild, assisted by his brother Bob, was appointed to make a general reconnaissance of Alaska and northwestern Canada with special reference to reindeer pasture and other general conditions which would be important to future reindeer husbandry. The elder Porsild was instrumental in helping secure those jobs for his sons.

They first went to Alaska and studied reindeer husbandry, collecting an estimated 5,000 plant specimens along the way. In the dead of winter they embarked on a nearly 1,600 km trip by dogsled along the north rim of Alaska to



**Dathan, Wendy.** 2012. *The Reindeer Botanist. Alf Erling Porsild, 1901-1977.* Northern Lights Series, Vol. 14. Calgary: University of Calgary [Co-published with the Arctic Institute of North America]. 726 p. ISBN 978-1-55238-586-9 [soft cover] Price: \$44.95 CAD, \$51.95 USD.

Herschel Island and then to Aklavik on the Mackenzie River Delta. Bitter winds, blizzards, ailing dogs, and difficult travel conditions were some of the challenges faced before they arrived in the spring of 1927.

Pasture reconnaissance was started in the Mackenzie Delta and later in the Great Bear Lake area. Travelling by boat, canoe, and on foot to nearly inaccessible places, they met the challenges and received the rewards of seeing places few, if any, white men had been. Living in tents or rustic cabins, such field work was physically demanding and dangerous at times. The brothers collected hundreds of plants as well as birds, mammals, and artifacts of human history for colleagues at the National Museum. In 1929 Erling concluded that the arctic coast and Eskimo Lakes regions of the District of

Mackenzie had a carrying capacity for at least 250,000 reindeer while the Great Bear Lake basin could support 300,000 more.

### CANADA'S REINDEER HERD, 1929-1935

Based on Erling's estimates and considering the needs of the indigenous people, Canadian government officials entered into an agreement with Carl Lomen, known as the "Reindeer King of Alaska" because of the large herds of animals owned by his company, to deliver 3,000 reindeer from western Alaska to the eastern shore of the Mackenzie River Delta. That gamble was entirely Lomen's; he would be paid \$65 per head only for the animals that were delivered safely. Unknown to those decision makers the reindeer industry in Alaska was soon to undergo a spectacular decline (Scotter, 1989).

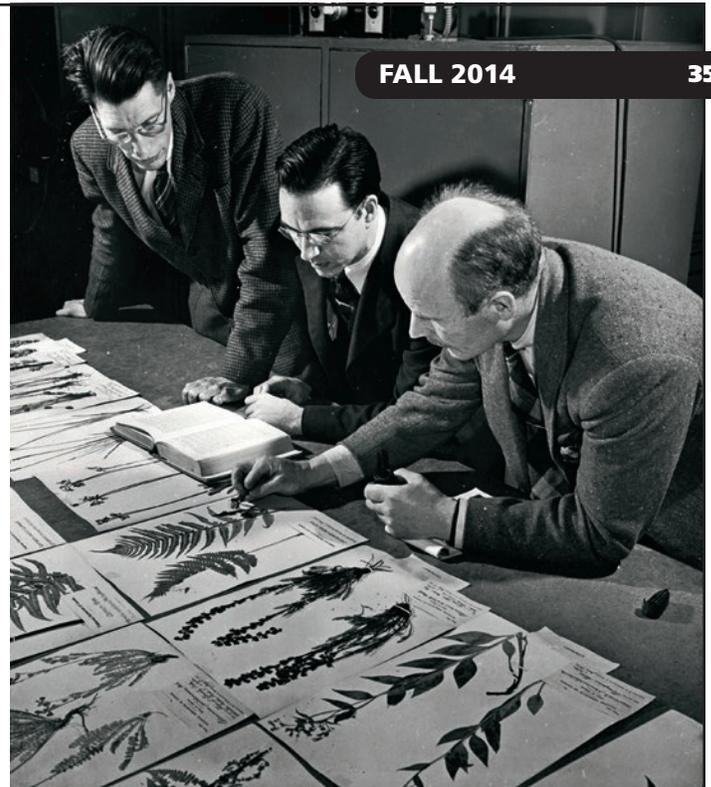
Preparations for the drive started in the summer of 1929. Fur clothing, mukluks, sleds, harnesses, and other equipment were acquired. Then, during November and December, a herd of about 3,450 reindeer – 2,900 females, 300 males, and 250 steers for draught purposes – were carefully chosen and marked. Erling represented the Canadian government and supervised the selection to ensure that only the best stock was included.

Andrew (Andy) Bahr, more than 60 years of age, was hired from retirement in Seattle by Lomen to lead the expedition largely through unmapped and unsettled country. He had gained a lifetime of knowledge about reindeer in his native Lapland and as a former

employee of Lomen's reindeer operations in Alaska.

Andy and Erling were at odds on the route that should be taken. Erling urged that the coastal route he used in 1927 should be followed while Andy insisted a route through the Brooks Mountains was much shorter and offered better grazing conditions. On 26 December 1929, Andy and 12 helpers started the drive using the route preferred by Bahr. The drive was plagued by a multitude of problems. Reindeer possess a strong homing instinct and hundreds escaped to return to their home range. Blizzards struck and reindeer wandered away. Temperatures as low as - 45 degrees C were encountered. Crew numbers dwindled. Wolves preyed on the reindeer. The reindeer mixed with other reindeer herds or joined with wild caribou. During the summer, insects often tormented the reindeer until they stampeded. Andy was sometimes sick. But the herd slowly made its way eastward. In the end, the long and tiring odyssey of about 2,600 km, all north of the Arctic Circle, took 63 months. Only 20 percent of the reindeer bore the marks placed on them at the time of selection, so 80 percent had been born on the trail.

The two brothers grew apart and at times refused to speak to each



other. Bob resigned from the reindeer project on 1 July 1933. Unfairly I believe, he received little credit for his work on the reindeer project or the thousands of plants he collected or helped to collect. Later in life the brothers reconciled and Bob made a substantial contribution to flora of the Yukon by collecting along the Dempster Highway as it was pushed northward toward Inuvik (Cody 2000).

While Andy was completing the drive, Erling was busy having corrals built at Kittigazuit on the east side of the Mackenzie Delta to receive the long expected reindeer. A house was built at Reindeer Station and other buildings were completed. In addition, he travelled to Sweden to recruit Saami herders to come to Canada to help local indigenous people understand the principles of reindeer husbandry. While there he met a rival botanist, Eric Hulten, with whom he had a hot or cold professional relationship over many years.

On 6 March 1935, Erling Porsild, Superintendent of the Department of the Interior Reindeer Station, officially

received 2,370 reindeer. That was fewer than the 3,000 animals Lomen had promised, but within a few weeks the birth of some 800 fawns more than recouped the losses.

Years later Erling provided the writer with a critic of a draft manuscript on the reindeer drive (Scotter 1978, 1982), which was prepared based on files at the Reindeer Station. He felt that I made too much of a hero of Andy Bahr and that Andy himself was responsible for much of the delay in the drive, which taxed Erling's patience almost to the breaking point.

Although the reindeer experiment was started with lofty goals, it never lived up to those expectations. Reasons for that failure are partly covered by Dathan but in much more detail by the writer (Scotter 1972, 1989).

### **THE NATIONAL HERBARIUM IN PEACE AND WAR, 1936-1977**

Erling started a series of short-term or acting positions as curator at the National Herbarium of Canada in 1936. He faced the daunting task of sorting out masses of dried plants collected by John Macoun, Oscar Malte, and others in addition to his own extensive collections from Alaska, the Mackenzie Delta, and the Great Bear Lake region. Over time and without much assistance he succeeded in processing the backlog of material as well as his own into the National Herbarium. The National Herbarium, through his efforts, was transformed from mundane to being the best collection of Canadian Arctic plants in the world.

The lack of a formal university degree greatly limited Erling's

opportunities for advancement. Influential individuals such as Hugh Raup, an ecologist at Harvard University, and M. L. Fernald, a botanist at the Gray Herbarium, were hugely supportive in Erling's attempt to get his research published and in securing a permanent position at the National Herbarium. Erling continued to publish papers of major significance and was finally awarded a Ph. D. from the University of Copenhagen for "The Vascular Plants of the Western Canadian Arctic Archipelago", published by the National Museum in 1955. This and numerous other publications such as "Vascular Plants of Continental Northwest Territories, Canada", co-authored with W. J. Cody, have shaped our understanding of northern botany.

Erling entered the controversy over Farley Mowat's book "People of the Deer." In a devastating attack on Mowat's credibility, Erling pointed out some of the more "serious errors and half-truths" and the blurring of lines between fiction and fact. The book affair raged beyond anything imaginable and wasted Erling's time since he felt it had little merit. After the controversy, Erling mentioned to the writer that he received a Christmas card from Mowat, and in his often mischievous ways, the message read something like, "Thanks old chum, you sold an extra 10,000 books for me." Perhaps it was only sales and not truth that mattered to Mowat.

Erling also had to deal with empire-building attempts from the Department of Agriculture. It was suggested the National Herbarium and Erling should be amalgamated with the Botany Division of the

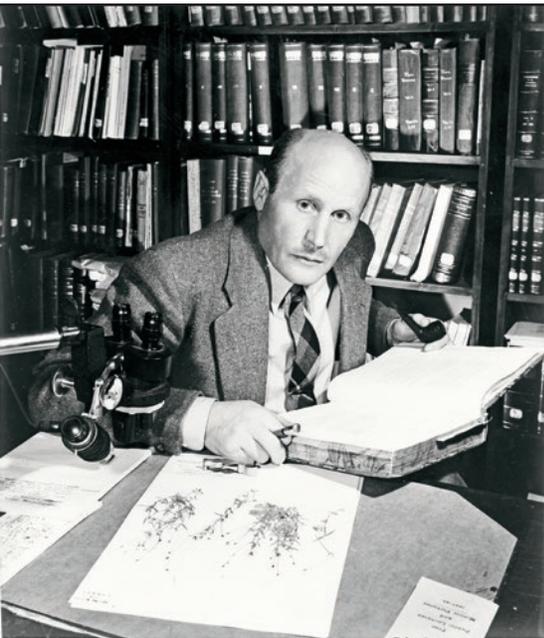
Central Experimental Farm. Those domestic battles were replaced with the real war over the Atlantic.

His botanical research was once again delayed when Erling was seconded to work as the Acting Canadian Consul to Greenland during WWII. Family ties and linguistic ability helped him make an important wartime contribution. He assisted in protecting the supply of cryolite required in the manufacture of aluminum. There was fear that the cryolite mine in Greenland might fall into enemy hands.

Canada played host to the Ninth International Botanical Congress in the summer of 1959, which was attended by over 3,000 delegates. Almost everyone at the National Herbarium had an important role to play in making that congress a remarkable success, but none more than Erling. He was the Botanical Excursion leader for trips to the Canadian Rockies and to the Arctic and Subarctic.

On the Rockies Excursion, Erling led 40 delegates with two days at Mount Edith Cavell and Athabaska Valley in Jasper National Park. That was followed by stops at Lake Agnes, Consolation Lake, Snow Creek Pass, and the Sunshine region of Banff National Park. Based on field work in the Canadian Rockies during 1945, 1946 and 1951, Erling prepared a highly useful guidebook for the delegates. In addition, Dagny Tande Lid prepared some of the illustrations at Sunshine for Erling's book "Rocky Mountain Wild Flowers", which was for public use.

The Arctic Excursion used a RCAF North Star aircraft for transportation of thirty delegates. Beginning in Montreal, the excursion made stops at Great Whale River on Hudson Bay, Frobisher Bay on Baffin Island, Resolute on Cornwallis Island, Coral harbour on Southhampton Island, Fort Chimo in northeastern



**ALF ERLING PORSILD IN HIS OFFICE AT THE NATIONAL HERBARIUM, OTTAWA, FEB 1957.** CANADIAN MUSEUM OF NATURE PHOTO COLLECTION

Quebec, and Knob Lake (Schefferville). I first met Erling as a delegate on his Arctic trip. I had just received my B. Sc. in ecology and had never been north, but my job assignment with the Canadian Wildlife Service was to research the forage and range requirement of barren-ground caribou. It was a unique opportunity for me to study the flora and vegetation patterns and to discuss northern botany with scientists of world stature.

Because of my lack of experience one delegate suggested that I should not have been there with so many eminent scientists. That comment did not deter Erling. He was welcoming and spent considerable time with me and made certain I was introduced to the other delegates. The excursion was an experience of a lifetime for me and a wonderful orientation to the North, where I conducted research over much of the next 30 years. It was interesting to note the interaction of these delegates, each with different backgrounds and expertise. For example, Erling and Eric Hulten, who had a stormy relationship over the years, would be on a hilltop discussing

the proper nomenclature for a particular plant. One would leave shaking his head in disagreement, but an hour later they would be together in a marsh discussing the merits of another species name.

Wendy Dathan details many other things about Erling's administrative duties, hiring of new staff, travel to other herbaria, meetings attended, his role with the Arctic Institute of North America, other collecting trips, honours and awards, and tragic losses in his personal life.

### CONCLUSIONS

Through the pages of Dathan's book we see Erling as a man with tremendous energy and intellectual ability. For the advancement of northern botany he was the right man at the right time and in the right place. His research was meticulous. He is regarded as one of Canada's most respected and renowned botanists.

His numerous papers were necessary background for many scientists in the past and are still relevant for scientists today and in the future as well. His scientific articles and books will be indispensable as a new Arctic floral is prepared and as the role of climate change in the North is addressed. Some of Erling papers were certainly indispensable to me as I pursued research on caribou range, the reindeer industry in the Mackenzie Delta, park planning in the north, and the ecology of the Sunshine meadows in Banff National Park.

My one regret is that the book's Selected Reference section

contains only a partial list of Erling's publications. A full list of his 128 publications as an appendix would have made the book more complete and useful. That information is available in another publication (Soper and Cody, 1978) but it would have been a welcome addition to an otherwise extremely comprehensive book.

Dathan's masterful book will be a delight to botanists, naturalists, northern historians, and anyone with an adventurous spirit. While the book may be too detailed with explanations of travel delays and mundane things like equipment procurement and repair, some readers may wish to tackle only parts of the book but others will want to cover all 726 pages. It is highly recommended to all.

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# Speculation on how Bitterroot (*Lewisia rediviva*) arrived in Southwestern Alberta

BY GEORGE W. SCOTTER

*Bitterroot, Lewisia rediviva, was first reported in Alberta by Kuijt and Michener (1985). They located two populations 22 km west of Pincher Creek on a ridge locally known as Kylo Hill and on a nearby ridge east of Mt. Backus at an elevation of 1700 to 1800 m.*

They suggested the newly discovered disjunct occurrences of the species in southern Alberta were probably derived from wind dispersal. Disseminules, which measure about three cm in diameter, are papery and light weight, making wind as a conspicuous proponent for natural dispersal in one of the windiest

areas in Alberta. Seed dispersal occurs two to four weeks after pollination.

Wilson et al. (1988) argued two alternatives in explanation of the dispersal of Bitterroot into southwestern Alberta. One suggestion included cultural dispersal by native or non-native groups. The second was natural

dispersal during intervals of past xeric conditions in the Altithermal of the Holocene era.

While none of those possibilities are rejected, the dissemination by birds, particularly by Clark's Nutcrackers (*Nucifraga columbiana*), should be considered. Clark's Nutcrackers commonly nest in subalpine forests, moving to lower elevations in the late summer. Outside the breeding season, Clark's Nutcrackers travel in conspecific flocks and are nomadic but not migratory.

Accompanied by Jim Lange and Etta Scotter, I visited both Alberta sites on 29 June 1988 when the Bitterroot plants were just starting to bloom. Clark's Nutcrackers were common in the scattered trees at both sites. The possible significance of their presence was not recognized at that time. Three years later I moved to the Upper Mission area of Kelowna, British Columbia. On my favorite dog-walking trail there were two large patches of Bitterroot with several hundred



PINK-PHASE BITTERROOT. JUDIE STEEVES



**WHITE-PHASE BITTERROOT IN FULL FLOWER.** HARVEY ABRAHAM

plants growing under widely spaced Ponderosa Pine (*Pinus ponderosa*). In the late summer I noted Clark's Nutcrackers foraging on the ground in those areas with their nearly fully-grown young mercilessly begging for food. I watched the foraging behavior with binoculars each autumn for about a decade but I could not get close enough to identify the food sources without disturbing the birds. However, with the exception of Ponderosa Pine cones, Bitterroot was the dominant plant in those areas with only small amounts of other plants.

By summer the nearly round, shining black seeds of Bitterroot, heavily charged with starch, are 2 mm long and may provide a high-

energy food source for Clark's Nutcrackers. Daubenmire (1975) reported that 100 mature seeds weighed between 0.100 – 0.156 g, with an average of 17 seeds produced in a single flower.

Ponderosa Pine seeds made up 83 percent of the ingested food of Clark's Nutcrackers at low to moderate elevations in western Montana (Tomback 1998). Their diet also includes a wide range of insects, spiders, small animals, berries and other fruits. Bitterroot seeds were not listed as a food source, but Clark's Nutcrackers are opportunistic feeders.

Notable features of the Clark's Nutcracker include a strong, sharp bill for extracting seeds from pine cones as well as for caching

them. Among American birds, the sublingual pouch is unique to the Clark's Nutcracker and is used for transporting seeds to the caching sites. This bird is well known for caching food behind flakes of tree bark and into the ground for later consumption. The nut-like seeds of Whitebark Pine (*Pinus albicaulis*) and Limber Pine (*Pinus flexilis*) are favorite foods. Misplaced caches and over-storing of such seeds by Clark's Nutcrackers are important in the spread and regeneration of Whitebark Pine (Tomback 1998, Tomback et al. 2001). According to Lorenz et al. (2011) pine seeds can be transported by those birds up to 32.6 km for caching in home ranges. Could Clark's Nutcrackers with their caching activities and/or other seed-eating birds by dispersing their droppings

be responsible for the presence of bitterroot in Alberta? That possibility should not be dismissed out of hand.

The nearest other known populations of Bitterroot are about 80 km west of the Alberta sites in the Flathead region of southeastern British Columbia where Bitterroot is locally abundant (Douglas et al. 1999, 2002). They mapped populations near Newgate, Skookumchuck, and Wasa Lake. To the south, Bitterroot is known from the Marias Pass area (Lesica 2002) in Glacier National Park and in Flathead County, Montana, with the nearest area about 85 km from the Alberta sites. Considering the frequent high winds in the area, the movement of birds from Bitterroot sites in British Columbia or Montana to Alberta could be accomplished in a short period of time. The role of birds in the dissemination of plants is under-appreciated. Some plant distributions can best be explained by bird dispersal through seeds in droppings, seeds on muddy feet, seeds and burrs on feathers, and by caching activities.

Unfortunately, both large Bitterroot sites in the Upper Mission were cleared for housing developments. Before the bulldozer arrived local residents salvaged some of the roots from one site and many of them were successfully replanted. I removed several roots and planted them on the Sommerfeldt ranch, at Whiskey Gap, Alberta near the Milk River (1230 m elevation), in suitable-looking habitat. Richardson's Ground Squirrels (*Urocitellus richardsonii*) found the Bitterroot to their liking and soon eliminated the plants. Although Bitterroot prefers dry climates west

of the Continental Divide, there are approximately twenty occurrences east of the divide in Montana (Daubenmire, 1975), mostly in areas uninhabited by Richardson's Ground Squirrels. It is interesting to speculate on how they may have influenced the distribution of Bitterroot east of the Continental Divide in Montana and southwestern Alberta.

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WHITE-PHASE BITTERROOT. HARVEY ABRAHAM

WHITE-PHASE BITTERROOT IN FULL FLOWER. BITTERROOT RANGES IN COLOR FROM WHITISH TO DEEP PINK OR ROSE DURING MAY AND JUNE. JUDIE STEEVES



# Up Close Naturally: What Do “Bugs” Do When Winter Comes?

BY MARGOT HERVIEUX

*It is easy to understand how birds and mammals survive the winter because we, too, make our own body heat and use insulation and shelter to keep warm. What I find truly amazing is how insects and spiders survive freezing temperatures.*

There are as many different insect strategies for winter survival as there are kinds of insects but one common approach is to take shelter and become inactive. Ants move into the lowest reaches of their nest where they can get below the frost line. All sorts of others, including wolf spiders, beetles, ladybugs, flies, some butterflies, and queen bees, hibernate under the snow where temperatures remain just above freezing.

Aquatic insects slow down as water temperatures drop but they don't need to worry about freezing. A wide variety of larvae, including mosquitoes, dragonflies, damselflies, and diving beetles, remain active in lakes and rivers, feeding on each other and avoiding hungry fish.

Some insects and spiders don't seek protection from the cold and actually spend the winter by freezing solid.

Freezing kills when ice crystals damage cells. This damage can be prevented by producing antifreeze, sugar or alcohol in the tissues. The antifreeze lowers the freezing point and also draws water from the cells to prevent ice crystals from forming.

Different insects survive the winter in different stages of development; egg, larvae, pupa or adult, but for each insect only one stage overwinters. In all cases, however, the overwintering stage must have time to prepare. If you put an insect in the freezer in July it will die but put the correct life stage of the same insect in the freezer in October and it will come to life when re-warmed.

Most insects that freeze in the winter do so as eggs or pupae but I was surprised to read recently that a variety of caterpillars also freeze solid. They stay up in the tree tops after the leaves fall and attach themselves to the twigs. This gives them a head start when

the leaves come out in the spring, but they are also an important food source for chickadees and other birds that are trying to fuel their winter furnaces.

Another unusual insect that lives with freezing is the larva of a fly that makes those round swellings on the stems of goldenrod. The plant produces the growth, called a gall, in response to chemicals from the fly egg laid in the stem. When the larvae hatches it remains protected inside the gall, sucking plant sap. In the fall it partly chews an exit hole and then spends the winter in a frozen state, ready to pupate and then emerge come spring.

Insects are amazing creatures and they continue to survive because of their incredible diversity of forms and behaviours. The next time you are out in the snow-covered woods, think about the many bugs that are spending the cold months in suspended animation just waiting for spring.



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

# Black Coyotes or Coydogs?

DICK DEKKER, PHD.



JIM BROHMAN'S BLACK COYOTE. JIM BROHMAN

*Are black Coyotes just a melanistic variant, or are they so-called coydogs, a hybrid of Coyotes and domestic dogs?*

In the Winter 2014 issue of *Nature Alberta*, Jim Brohman detailed a ‘First Hand’ encounter with a black Coyote in Elk Island Park [page 34]. The article made me think of my own observations of black Coyotes in central Alberta. I knew where I had come across

them, at Beaverhills Lake, but the event was way back in time, and finding the exact date would mean checking hundreds of hand-written pages in my field diaries.

Then, in the Spring 2014 issue of *Nature Alberta*, Dennis Baresco wrote of Christopher Lee’s suggestion that black Coyotes are most likely coydogs [page 35]. I agree with him, and his article stimulated me to make the effort of digging up my sightings. To my relief, just before I

was going to give up, I eventually found the first entry, dated May 1, 1995.

The location was the central west side of Beaverhills Lake, about half a kilometre from the shore. Here, the cow pasture behind an inland farm was studded with willows, and as I approached on foot along the fence line, I spotted a group of eight canids emerging from the bushes. As soon as they became aware of me, standing in the open, they retreated back into cover. Watching through binoculars I had just enough time to note that the animals appeared to be Coyotes, but several were jet black, others dark brown or



A BLACK WOLF IN THE MIETTE HILLS. BRIAN GENEREUX

tan-grey. The most unusual pack member that kept to the rear of the group was piebald - white and black. In fact, it looked like a border collie, which is a classic breed of sheep dog popular with area farmers and my favourite kind of dog, for it is friendly and does not bark.

Three days later, in the evening, as I approached the same location, I glassed and spotted five canids, all of them jet black. However, they were shy and my hope of getting a closer look was dashed. Another chance arrived on May 13, when there were six members of the pack out in the open, all of them black. The darkest three featured an area of lighter grey on the throat.

By late summer, the pack appeared to have split up. On September 24, I saw two black Coyotes trotting across a stubble field west of the lake. And on May 1 of the following year, I surprised two coydogs in the reeds along the north shore of Beaverhills Lake. One was dark-brown, the other mostly black. As it crossed open ground to the island, I could see that its throat and chest were light grey, its feet and the tip of its tail were whitish.

My last sighting of the pack was on April 10, 1997, not far from the willow pasture of the first encounter in 1995. Two of the animals were tan-grey, one was jet black, the other a piebald. Its head, chest, shoulders and rump were black, with an area of white on the neck and across the middle of its body. The black tail ended in a white plume. As to what happened to these coydogs, rumour has it that the pack was eventually wiped out by local residents.

In the late 1990s, I heard of a sighting of a black Coyote well north of the lake, and at about the same time, naturalist Brian Genereux observed a group of four at Whitford Lake, which is about 60 km northeast of Beaverhills. Two of these animals looked like regular Coyotes, two others were black. A few years after that, Brian saw a Coyote and a large shepherd-like dog travelling together at Whitford Lake.



As Jim Brohman and Dennis Baresco remarked in their respective articles, black fur is rare in Coyotes, but common in wolves [see article, "Grey Wolves, Black Wolves, Red Wolves, and Black Coyotes" pg 45]. The well-studied wolves of Yellowstone, which were reintroduced in 1994 with a dozen animals caught in western Alberta, now consist of about 50 percent blacks. In a recent paper (Hedrick et al. 2014) two scientists discuss the gene flow of black wolves. The technical details of their paper are way over my head, but I was pleased when they invited me to contribute my data from Jasper National Park. There, over half a century of watching, I have recorded 241 black wolves and 110 greys. This comparison does not include repeat sightings of known packs during the same year.

## Ponderables

Study nature, love nature, stay close to nature. It will never fail you.

FRANK LLOYD WRIGHT, ARCHITECT WHO COINED THE PHILOSOPHY, ORGANIC ARCHITECTURE: DESIGNING STRUCTURES THAT WERE IN HARMONY WITH HUMANITY AND ITS ENVIRONMENT

THE NORTH RAVEN RIVER IS ALSO  
CALLED STAUFFER'S CREEK.

STEPHANIE FENSON (ACA)

# The North Raven River Conservation Site

FROM THE ACA NEWSLETTER (7/17/14) AND ACA WEBSITE



*The North Raven River Conservation Site, located approximately 30 km southeast of Rocky Mountain House, boasts excellent angling opportunities for Brown Trout and Brook Trout, as well as Northern Pike and Mountain Whitefish.*

Once a popular drinking spot for thirsty cattle, the North Raven River had become a barren landscape due to excessive trampling. After much dedication such as in-stream habitat improvements, off-site cattle watering systems and cattle exclusion fencing, this stream has been restored. It is thriving because of continued conservation efforts including land purchases of important headwater springs and habitat protection leases with caring landowners.

The 442 acre Conservation Site is a fisheries enhancement area where cattle exclusion fencing has been constructed along the North Raven River (Stauffer Creek) to improve riparian and in-stream

habitat conditions. In addition, a parking lot and washroom facilities have been developed at SW-10-037-05-W5M to provide public access to the riparian corridor. Lands surrounding the parking area and riparian corridors are both privately-owned and Crown grazing lease; therefore, anglers must remain within the fenced corridor or obtain permission to do otherwise.

Visitors are reminded that the site is day use and foot access only and no open fires. Please

contact landowner for access to private lands and refer to access condition information provided by AESRD on the Recreational Access to Agricultural Public Land website for leased Crown lands at [www.esrd.alberta.ca](http://www.esrd.alberta.ca). Refer to the latest edition of Alberta Guide to Sportfishing Regulations.

Partners in the North Raven River Conservation Site are Alberta Conservation Association, Alberta Fish and Game Association, Alberta Environment and Sustainable Resource Development (AESRD), Trout Unlimited Canada.

## A GRAVEL PIT?

Clearwater County is considering an application for a gravel pit near the North Raven River. The proposal has created great concern from a number of sources. For a summary of the issue, see "Alberta Issues in Brief: Gravel Pit Proposed" (page 11).



TWO BLACK WOLVES IN JASPER NATIONAL PARK. BRIAN GENEUREUX

# Grey Wolves, Black Wolves, Red Wolves, and Black Coyotes

DICK DEKKER, PHD.

*In the standard textbook on Canadian mammals written by Ottawa zoologist A.W.F. Banfield (1974), the common species name given to *Canis lupus* was just Wolf, while the American common name has always been Gray Wolf. Unfortunately, the American name, including its spelling (gray versus grey), has now also been adopted in Canada. This is a pity, because this colour-based label clearly is a misnomer.*

The present range of the Gray Wolf extends right across the continent from Montana to Minnesota and from Alaska to Labrador. But there is a marked difference between east and west. With very rare exceptions, all eastern North American wolves are a shade of tan-grey, resembling the Coyote. By contrast, the pelage colour

of western Gray Wolves shows extreme individual variation from black to white (Dekker 2009). In addition, it is well-known that most arctic wolves are white.

In our Rocky Mountain National Parks, melanism has always been common. In the 1940s, 55% of 80 wolves seen by park wardens were black, and in the summers

of 1966-1985, the black percentage was 53% in 132 wolves that I watched at their dens in Jasper's upper Snake Indian Valley. In a wolf territory in the lower Athabasca River valley, where I have been looking for wolves over 35 winters, the percentage of black rose to 73% in 1988 and 82% in 2013 (Hedrick et al. 2014).

**TWO BLACK WOLVES IN THE  
MIETTE HILLS.** BRIAN GENEREUX

Black wolves used to be common in the southern states of the USA, where wolves are a lot smaller than elsewhere and go by the common name of Red Wolf. In Mississippi and Florida, more than half a century ago, the renowned American wolfers Stanley Young and Edward Goldman (1944) named two subspecies of the Red Wolf *Canis niger* and *Canis niger rufus*. This means that the name Red Wolf actually is a misnomer too.

In a recently published study of 114 canids from Missouri and Arkansas, preserved in museum collections, black Coyotes were identified as hybrids of Coyotes and the small Red Wolves of that

region (Elder and Hayden 2014).

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## BOOK REVIEW

# Wild Wolves We Have Known

REVIEW FROM: WOLF.ORG; WILD WOLF CENTRE

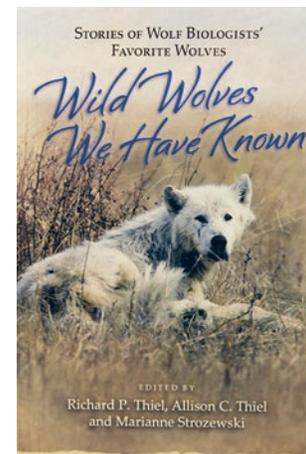
Most wolf biologists have encountered hundreds of wild wolves in their careers, and in that process, many have become witness to the intimate lives and fates of a select handful of individuals. Over the years, these biologists have occasionally shared stories of their 'favorite' wolves with one another, often over drinks at the local pub during wolf conferences. Few outsiders have been privy to these stories—until now!

This is a remarkable collection of tales spanning the globe, from the earliest studies to the present day. Wild Wolves We Have Known tells the stories of individual wolves through the lenses of those who know them best—the

biologists who have studied them. Immerse yourself in the fieldwork; observe the challenges facing the species, and bear witness to the extraordinary resilience of these remarkable wolves. Amongst the many story-tellers is Nature Alberta's own Lu Carbyn. The book has a limiting printing of 2,500 copies.

*"If you've never encountered a wolf in the wild, read this book. Once you meet these wolves, you will never forget them. And, perhaps, you'll come to understand why we must find room for the wolves to continue their story."* —Don Shelby

*"These tales provide a glimpse into the amazing lives of individual wolves, revealing their*



**Edited by Richard P. Thiel, Allison C. Thiel and Marianne Strozewski.**

Paperback; ISBN-10: 0615860028;  
ISBN-13: 978-0615860022

*unique personalities, highlighting their struggles and triumphs, and illustrating the unique influence an individual can have on the survival of its pack and the population to which it belongs.* —Goodreads.com

## CELESTIAL HAPPENINGS

# Starry Nights

## Fall/Winter: November to January

BY JOHN MCFAUL

### FEATURED CONSTELLATIONS: PEGASUS

Riding high above the south-western horizon during the later fall and early winter season is the “Great Square of Pegasus”. This represents the magnificent winged horse of ancient Greek mythology. Pegasus was born out of the blood from the Medusa mixing with the foam of the sea after she was killed by the hero Perseus. He then mounted Pegasus and flew to the rescue of the beautiful princess Andromeda who had been chained to the coast as an offering to appease the sea monster Cetus.

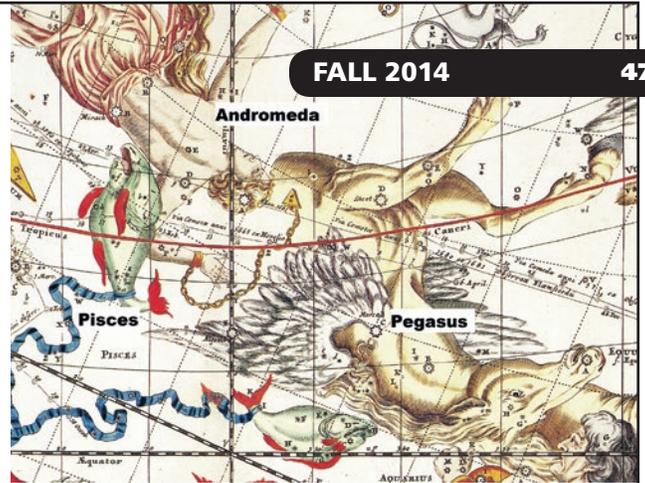
The upper left star in the square is actually shared with the constellation Andromeda. It is a good starting point when searching for the great Andromeda Galaxy. From this star look two stars to the left and then go up two fainter stars and look for the fuzzy spot of light which is the galaxy. This is best done with a pair of binoculars.

The Greek hero Bellerophon ran afoul of Sthenaboea, the wife of the king of Tiryns, because he rejected her advances. As a result he was ordered to complete some very dangerous tasks, such as the killing of the Chimaera whose body was made from the head of a lion, the body of a goat and the tail of a snake. Minerva, the goddess of wisdom, arranged for Bellerophon to team up with Pegasus to complete his tasks. In the end Bellerophon became arrogant and attempted to use Pegasus to fly to the realm of the gods. Zeus could not allow this to happen and caused Pegasus to throw his rider. Bellerophon crashed to the earth and was blinded and lamed. This was a

lesson to all mortals who presume to become gods.

Pegasus was considered to be a very kind horse with a love of life. One day while prancing about Mt. Helicon its hooves struck a rock which broke open to release the spring of Hippocrene. The waters of this spring were sacred to the muses. To drink from these waters would give one the gift of poetry. John Keats in his Ode to a Nightingale speaks of his wish to drink from the waters of the Hippocrene.

The number of stars that you can see within the boundary of the great square is a good test of the darkness of the sky and your vision. In the city few if any stars may be seen. Under dark country skies up to 17 faint stars could be visible. Just outside the right edge of the square is the star 51 Pegasi. It was the first star to be confirmed to have a planet orbiting it, besides our sun. A line drawn down through the eastern side of the square of Pegasus intersects the celestial equator at the point where the sun is found on March 21st, the vernal equinox.



### CELESTIAL HAPPENINGS

**Sun:** Rise – Nov. 1 (08:34 MDT), Dec. 1 (08:27 MST), Jan. 1 (08:50 MST)  
Set – Nov. 1 (18:01 MDT), Dec. 1 (16:18 MST), Jan. 1 (16:25 MST)  
Times are for Edmonton (Daylight Saving Time ends Nov. 2nd)

**Moon:** Full – Nov. 6th, Dec. 6th, Jan. 4th  
New – Nov. 22nd, Dec. 21st, Jan. 20th

**Note:** There will be a total eclipse of the Moon on October 8th. The partial phase starts at 3:18 AM. Totality begins at 4:27 AM and ends at 5:22 AM.

**Planets:** **Mercury** may be seen low in the SE morning sky during the first few days of November. It becomes an evening object in the SW from about January 6th to the 18th. On Jan. 10th and 11th it will be very close to Venus about 10 degrees above the south western horizon shortly after sunset.

**Venus** will appear low in the south western sky from mid-December through January. On January 21st it will form a triangle with Mercury and the very thin crescent moon.

**Mars** travels through the zodiacal constellations of Sagittarius (November), Capricorn (December) and Aquarius (January) during this time period. It may be seen in the southern evening sky. The moon is nearby on November 25 and December 24th.

**Jupiter** is to be found in the constellation Leo. It rises in the eastern sky during the late hours and is high in the south by sunrise. The Moon passes close to Jupiter on November 14th, December 11th and January 8th.

**Saturn** is a morning object in the south eastern sky. It is about 15 to 20 degrees above the horizon a little before sunrise during the months of December and January. It is located just above the reddish star Antares which is the brightest star in the constellation Scorpius. The moon is nearby on December 19th and January 16th.

**Meteor Shower:** Watch for the Leonids on November 17th, the Geminids on December 13th and the Quadrantids on Jan 3rd.  
*The rate of meteors observed is for dark skies well away from city lights and with no Moon.*

# Friends of Elk Island Society

*Incorporated in July 1984 the Friends of Elk Island Society (FEIS) is a non-profit, charitable association that cooperates with Parks Canada to promote understanding, appreciation and respect for Elk Island National Park. The Club is Nature Alberta's newest Affiliate Club.*

The FEIS fulfills this mission by participating in conservation, science based research, special events and providing services to its members. The FEIS raises funds and administers donations to further the objectives of the society.

The FEIS is managed by a board of directors who are elected annually by the society's membership. The board acts as a source of advice, information, funding and volunteer support for Elk Island National Park whilst also establishing and implementing policies and goals for the society.

The FEIS publish a regular quarterly newsletter "The Trumpeter" that keeps members informed of events in the Park, volunteer opportunities and society business.

To receive the Trumpeter, information on Volunteer opportunities or other information, contact FEIS:

The Friends of Elk Island Society  
Box 70, 9920-63 Avenue, Edmonton, AB  
T6E 0G9

Or by email at [info@elkisland.ca](mailto:info@elkisland.ca).  
Everything you want to know about  
FEIS is on its website: [www.elkisland.ca](http://www.elkisland.ca).



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