

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



SEE THE FEATURE STORY (PAGE 24). JACK BORNO

feature article

Which were the Best Years for Mountain Bluebirds on Calgary Area Bluebird Trails?



SEE MARGOT HERVIEUX'S COLUMN "LICHENS", PG 44. ALBERTAWOW.COM



TED HINDMARCH ON A BANDING EXCURSION IN THE COLD LAKE AREA. SEE THE STORY, "CITIZEN SCIENCE IN ALBERTA" PG 38. GERALD ROMANCHUK



SEE THE STORY, "THEY SOUND LIKE LIONS", PG 18. JOHN WARDEN

*Nature Alberta:
Celebrating our natural heritage*

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FALL 2012

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

- (a) To encourage among all Albertans, by all means possible, an increase in their knowledge of natural history and understanding of ecological processes;
- (b) To promote an increase in the exchange of information and views among natural history clubs and societies in Alberta;
- (c) To foster and assist in the formation of additional natural history clubs and societies in Alberta;
- (d) To promote the establishment of natural areas and nature reserves, to conserve and protect species, communities or other features of interest;
- (e) To organize, or coordinate symposia, conferences, field meetings, nature camps, research and other activities whether of a similar or dissimilar nature;
- (f) 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

EDITOR'S NOTE:

The "Alberta Issues in Brief" section of this edition (starting on page 4) has good news – Fish and Wildlife busting a poaching operation, Rumsey Natural Area protection, ACA's "My Meat's Legal!" program. As you might suspect, it also has bad news, the vast majority coming out of Ottawa. Rather than your Editor's ramblings, I've reprinted Nature Canada Executive Director Ian Davidson's commentary in the latest "Nature Action Report" which expresses the general situation succinctly and meaningfully – though with much more diplomacy than I would use! Nature Alberta is a provincial affiliate of Nature Canada. Thanks to Chris Sutton of Nature Canada for permission to reprint this editorial.

Is Science Endangered?

BY IAN DAVIDSON

Gutting Our Environmental Laws.
Politics Trumping Research. Is
Science Itself Endangered in
Canada Today?

If you've been following the news lately, you may be wondering. This spring, Parliament passed Bill C-38, the omnibus budget bill with sweeping changes to our system of environmental laws in order to fast-track development projects like the Northern Gateway Pipeline. In passing this budget bill, essential protections are being removed at the expense of our land, water, climate and wildlife. The gutting of environmental laws means Canadians will face increasing risk from rushed industrial projects, and will have fewer opportunities to participate

in environmental reviews. It also means the role of science has been greatly reduced when it comes to making informed policy decisions about energy, the economy and the environment.

The federal government has made changes or cuts to over 70 federal environmental laws — with revisions to essentially every major piece of environmental legislation this country has passed over the last 40 years, including a complete gutting and rewriting of the Canadian Environmental Assessment Act. The National Round Table on Environment and Economy was dissolved, and funding eliminated for the PEARL [Polar Environment Atmospheric Research Laboratory] Arctic atmospheric research lab and the Experimental Lakes Area in northwestern Ontario.

At a time of increased investment in a resource economy, Canadians

are calling for more environmental protection, not less. We expect the federal government to safeguard our families and nature from pollution, toxic contamination and other environmental threats.

We deserve strong environmental laws based on science, not politics.

In this issue [Fall/Winter 2012, *Nature: Your Action Report for the Supporters of Nature Canada*], you'll read about potential changes to the Species At Risk Act, and what that means for our precious wildlife. You'll also read about the State of Canada's Birds Report. This report simply would not be possible without scientific research — 40 years' worth — that has provided us with the means to ensure we have healthy ecosystems for generations to come.



Ian Davidson, Executive Director, Nature Canada

If you're like me, you might feel frustrated, even angry. But I hope, above all, you feel empowered. As a member of Nature Canada, you are taking action to protect the nature we cherish so much. Your actions in your community are connected across your province and right across our country. More than ever before, nature's voice in Canada is coming from you, me and other concerned citizens.

The full Fall/Winter 2012, *Nature: Your Action Report for the Supporters of Nature Canada* is available, on Nature Canada's website: www.naturecanada.ca.

Ponderables

"I'll say it a dozen times, people have to remember that the Oil Sands are owned by the people, they're not owned by the oil companies."

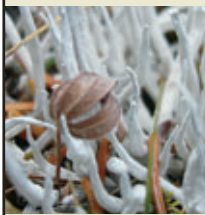
THE LATE PETER LOUGHEED,
PREMIER OF ALBERTA
1971-1985

On the Covers:



FRONT COVER

There is something about bluebirds – in this case, Mountain Bluebirds – that is addictive (in a good way!). For trail monitors and banders, their duties are a welcome passion. For naturalists or anyone else, the sight of a sky-blue bird flashing by or sitting on a fencepost, wire or nestbox is a nature delight. The Feature Story (starting on page 24) is about Calgary Area Mountain Bluebird Trails, but there are many others throughout Alberta and the experience is the same everywhere. An added bonus: Bluebirds are extremely photogenic, as shown by the series of Jack Borno's photos illustrating the Feature Story.



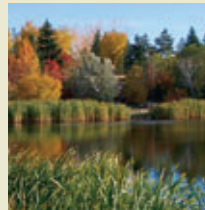
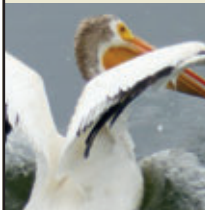
INSIDE FRONT COVER

Lichens! Everyone has seen many different kinds, but not many people have an understanding of this form of wildlife – a very different form of wildlife, to be sure; fewer still can name them. Yet they are beautiful and dramatic, as Mark Townsend's photos (see Margot Hervieux's column, page 44) plainly illustrate. For many

more lichen photos, see Mark's great website, AlbertaWow.com.

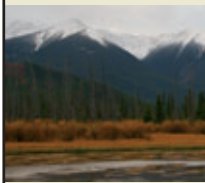
It is probably much easier to band Mountain Bluebirds than raptors, and the thrill is certainly of a different sort. Still, the look on Ted Hindmarch's face as he bands a Great Gray Owl seems to express a similar delight. See the Citizen Science story, page 38.

John Warden's stories and photos are always emotional and definitive of nature. His column this edition, "They Sound like Lions" (page 18) is about those formidable and magnificent ungulates, Bison. Photographing them is a challenge, but as John says: "After many days and many hundreds of shots, I found the image that I think captures the art of the Bison."



INSIDE BACK COVER

Wildlife photographers will travel long distances to partake in their passion. Jim Struthers is fortunate to have a lake in his back yard, where subjects abound. For more on Jim and Lake Beaumaris, see the article, page 21.



BACK COVER

It is always a bit sad to see the green of summer disappear – thank goodness for conifers! However, the colours and scenes of autumn are, in many ways, more dramatic. Rick Price's mid-October 2012 trip to Banff and area produced many great photos (including a magnificent bull Elk!); this Vermilion Lakes landscape is one of them. If you wish to see more of Rick's photography, go to his website www.adanacphoto.com. You can purchase prints of his photos if you so wish.

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ALBERTA ISSUES IN BRIEF

UPDATE: Nesting Sites Dismantled

In the Summer 2012 *Nature Alberta* ("Alberta Issues in Brief" pg 5), an article outlined the removal of a number of Ferruginous Hawk nesting platforms to facilitate an ATCO power transmission line running between Brooks and Hanna. As reported by the *Medicine Hat News* (Alex McCuaig, July 12, 2012), the removal was done in collaboration with Alberta Fish and Wildlife (F&W), which felt that the laws prohibiting the disturbing of the nests of endangered species did not apply in this case because the nests were manmade and thus, "fall into a different category...because we have the option to move them out of harm's way." The nesting platforms, according to F&W, will be put back by ATCO once the nesting period ends on July 15.

However, in a *Medicine Hat News* article on August 4, 2012, by reporter Alex McCuaig, long-time Ferruginous Hawk researcher Dr. Joe Schmutz was not convinced of the removal's legality. Dr. Schmutz wrote to Environment Minister Diana McQueen (the letter was obtained by the *Medicine Hat News*) on July 19, 2012, stating that "such action also contravenes the Alberta Wildlife Act." Dr. Schmutz went further in his letter: "...this action is a breach of due diligence in environmental management... By 2012, we have learned

far too much about wildlife management, public administration and corporate behaviour to rest this breach on a simple claim of 'misunderstanding.'"

Many ranchers and others in the area also believe that the law was broken. In the same *Medicine Hat News* article, Hanna rancher Greg Gordon called the dismantling of the hawk nests "destructive" and said: "We're landowners out here and ranchers out here — stewards of the land and with our association with [Schmutz] we have a better understanding of the hawks. We're no formal group. We're just concerned landowners and this is part of (the hawk's) habitat and we think it's part of our responsibility as land stewards to look after the wildlife." Nesting Ferruginous Hawks are famous for their role in prey consumption; each year, one pair can take hundreds of Richardson Ground Squirrels.

ATCO Senior Vice President Paul Goguen, in a "Letter to the Editor" (*Medicine Hat News*, August 17, 2012) stated that "ATCO Electric regrets any potential impact on the research being undertaken by Dr. Josef Schmutz due to the temporary nest platform removal." However, stated Mr. Goguen, "this temporary removal occurred in close consultation with, and permission from, the Department of Environment and Sustainable Resource Development. As such we are confident that the activity occurred within the requirements of existing Acts and Regulations and, more importantly, meets our goal of responsible environmental management."

ATCO has met with Dr Schmutz and, said Mr Goguen in his letter, "[Dr Schmutz] has agreed to lend his expertise to ATCO Electric and work in collaboration with our company, the Department of Environment, Sustainable Resource Development and the Special Area Board on the timing and relocation of the nest platforms."

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Shelterbelt Centre Cut Down

Information for this article from: Canadian Cowboy Country Magazine, Oct/Nov 2012. This edition also has an article, The Death of the PFRA: Destroying Canada's Greatest Success Story"; by Sheri Monk. Website: www.cowboycountrymagazine.com.

Naturalists have a common bond with farmers and ranchers, even if it is not always recognized. However, that bond has become more obvious with the reckless elimination of the Prairie Farm Rehabilitation Administration (PFRA)*...and now, the Shelterbelt Centre.

The Shelterbelt Centre opened in 1901 – a full one hundred and eleven years ago! – at Indian Head, Saskatchewan. Its mandate: to grow and supply prairie-hardy trees and shrubs to agricultural producers, mostly for shelterbelts. Even before that, in the late 1800s, the Agriculture Experimental Station at Indian Head was distributing prairie-hardy trees.

By 2004, the Centre** had distributed almost 600 million seedlings to over 645 thousand applicants across the prairies. The value of shelterbelts (and, it

must be said, PFRA's community pastures) to both agriculture and wildlife cannot be over-estimated. It is hard to imagine any federal government program that has fulfilled its mandate, and continues to do so, with such stunning success.

On-going success, apparently, is a low priority for the federal government. The Prairie Shelterbelt Program is officially slated for shutdown by December 2013.

A citizens group, Friends of the Shelterbelt Program, has been formed to educate the public and try to convince the government to reconsider the shutdown decision. For more information, you can contact them at saveshelterbeltprogram@gmail.com. Check Facebook at "Save the Prairie Shelterbelt Program" for links and other information.

* See *Nature Alberta*, Summer 2012: "Community Pasture Program R. I. P." pg 9, for an article on the federal government's dumping of the PFRA.

** The Centre became part of PFRA in 1963; previously, the Centre worked with the PFRA, which was created in the 1930s.

BENEFITS OF SHELTERBELTS

Shelterbelts reduce wind speed, creating a microclimate for crops as well as yards and gardens. A mature shelterbelt, with two rows of conifers, reduces heat requirements in a farmhouse on average by 25%. Snow trapping and the wind reduction effect of field shelterbelts reduce wind erosion and can increase yields in dry years. Shelterbelts provide excellent habitat and travel corridors for a wide variety of wildlife, birds in particular.

Information from: *Canadian Cowboy Country Magazine*, October/November 2012.

UPDATE: PFRA (Saskatchewan)

Saskatchewan's First Nations, led by various Treaty Land Entitlement (TLE) Chiefs, want to bring forward a cooperative business option called the "*First Nations Sustainable Land Management Joint Venture*" for the federal and provincial government(s) to consider regarding the federal government's discontinuation of the PFRA Community Pasture Program. Many provincial First Nations are concerned that the Saskatchewan Government intends to sell 1.6 million acres of the province's most ecologically rich grasslands to a select few cattle producers.

"Whenever Crown land is being sold, there are some moral and legal imperatives that cannot be ignored," said former Federation of Saskatchewan Indian Nations (FSIN) Chief Roland Crowe. "We have an historical and economic interest in the way these pastures will be used and we do not want to see them parcelled up and sold off. Rather than placing them in the hands of a privileged few or worse in the hands of investors and non-residents, let's work together to find a way to conserve and manage these grasslands locally and in whole rather than in part for the good of all Saskatchewan people."

Chief Crowe said that First Nations believe that this land – some of the last large remnants of the prairie the way it was before settlement – should remain in the public trust and continue to be managed for both economic and ecological imperatives using an inclusive, transparent and third party based governance model.

Information from a Media Release by Saskatchewan First Nations

UPDATE: PFRA (Alberta)

There are three PFRA-operated pastures in Alberta, all within Canadian Forces Base (CFB) Suffield: Queenston, Koomati and Casa Berardi. The pastures are operated on a cost-recovery basis for the benefit of three local Alberta Grazing Associations: Drowning Ford, Pipeline, and Jenner.

PFRA is a service agency now within the department of Agriculture and Agri-food Canada (AAFC). AAFC is supposed to deliver programs and services to help achieve an environmentally sustainable, competitive and innovative agriculture, agri-food and agri-based products sector. But now, AAFC has decided not

to continue its long-standing commitment to the grazing associations, allegedly as part of the Federal Government's most recent austerity demands.

Another entity will have to come forward and negotiate with the Department of National Defence (DND) in order to continue and manage the community pasture grazing operations on these lands, which are federal lands under the administration and control of CFB Suffield in right of the Crown. All infrastructure associated with the Suffield Community Pasture is the property of AAFC. One of the three Suffield community pastures (Casa Berardi) is located within the boundaries of the CFB Suffield

National Wildlife Area. The Middle Sand Hills area was originally the Suffield Community Pasture but it was closed due to environmental concerns in the mid-1970s and the three extant pasture areas were established to sustain the grazing program.

What the future holds for these pastures is up in the air. DND has been very protective of the natural environment at CFB Suffield; whether it will be allowed to continue to be protective is the big question. The future of the National Wildlife Area is also in question: will it remain for wildlife...or become a gas field? We should soon know.

Rumsey Natural Area Sees a Halt to New Oil and Gas Access

Alberta Wilderness Association Press Release, Sept 11, 2012

Alberta Energy has made changes so that all new petroleum and natural gas agreements within the Rumsey Natural Area will now come with the condition: "Surface Access is Not Permitted."

"This is an encouraging first step in the long-term phase out of oil and gas activity in Rumsey Natural Area," says Cliff Wallis, Alberta Wilderness Association vice-president. "It has been a long, long time coming but we are pleased that Rumsey may be started along the road to true protection."

Bizarrely, although Rumsey was declared a Natural Area in 1996, new oil and gas leases were sold by the Alberta government, new wells drilled and new pipelines constructed. The incomparable values of the area have been affected as a result.

The 241 sq km Rumsey area is about 40 km north of Drumheller; it constitutes the largest remaining tract of aspen parkland in the world. Its biological significance lies mainly in the variety, quality and extent of representative natural habitats.

"Focus for management of the Rumsey Natural Area can now shift away from minimizing the impact of new industrial disturbances towards restoring and maintaining native vegetation," says Cheryl Bradley, Alberta Native Plant Council.

For more information contact:

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Alberta Wilderness Association
Phone: (403) 271-1408
Cell: (403) 607-1970

Cheryl Bradley
Alberta Native Plant Council:
Phone: (403) 328-1245

“My Meat’s Legal”

Fish and wildlife crime happens every single day in Alberta. Say that you respect and value our wild species. Take a stand against poaching by joining the Alberta Conservation Association’s (ACA) “My Meat’s Legal” movement and by reporting a poacher and wearing the new t-shirts.

Be on the lookout. Take a stand. Make the call if you are aware of any poaching incidents. Call the Report A Poacher hotline at 1-800-642-3800, 24 hours a day, 7 days a week. “My Meat’s Legal” t-shirts can be purchased through the ACA website and other locations. All proceeds go to the Report A Poacher program, funding education, awareness and informant rewards.



POACHING FACTS

- 240 poachers were arrested in Alberta in 2011.
- Fewer than 10% of poaching cases are detected, according to national estimates.
- Poaching events in Alberta would be close to 2,400, or an average of 6.5 per day (2011), based on the 10% detection estimate.
- Top 5 poached mammals in Alberta are elk, moose, bighorn sheep, grizzly bear and bison.
- Walleye are the most commonly poached fish (size and limit violations).
- Top 3 poached birds are bald eagle, goose and owls. Bald eagle feathers, beaks and claws are typically sold on the black market
- Black bear is highly prized by poachers who sell their paws and gallbladders to Asia.

Fish and Wildlife Busts Wildlife Trafficking Operation

A four-month-long undercover investigation focusing on the trafficking of big game antlers in the Lougheed area concluded on August 25th, 2012, with charges laid against Garland Larry Poyser of Sedgewick, Alberta, and his business, Poyser Auto Service. Charges include two counts of unlawfully trafficking in wildlife, one count of possessing wildlife for the purpose of trafficking, and one count of unlawful possession of wildlife.

“Illegal trafficking of wildlife will not be tolerated in Alberta. This is a very serious crime that needs to be dealt with through serious punishments,” said Justice and Solicitor General Minister Jonathan

Denis. “My thanks go out to the Fish and Wildlife officers for their great work on this investigation and for continuing to protect Alberta’s wildlife resources.”

Fish and Wildlife officers executed a search warrant at Poyser Auto Service on August 25th, 2012, seizing 500 sets of white-tailed deer and mule deer antlers, 36 sets of moose antlers, six sets of elk antlers and one set of caribou antlers.

Anyone with information that would assist in solving any fish or

wildlife crime in Alberta is asked to contact a local Alberta government Fish and Wildlife Enforcement office or call the 24-hour, toll-free Report A Poacher line at 1-800-642-3800. Anyone who provides information can remain anonymous and could qualify for a reward.

Information from a September 25, 2012 Media Release by AB Justice and Solicitor General



ANTLERS CONFISCATED IN THE BUST; PHOTO TAKEN AUGUST 25, 2012

ALBERTA JUSTICE AND SOLICITOR GENERAL

Update: The Next Step to Protect Public Rangeland

Dr. Neil Brown, Progressive Conservative Member of the Legislative Assembly (MLA) for Calgary MacKay-Nosehill, is currently developing a private member's bill that would protect important wildlife habitat on public prairie rangeland in southern Alberta. The bill, Bill 202, would only apply to public lands that are available for sale to private interests in southern Alberta.

It has two components:

- reports prepared for such land that document wildlife habitat would have to be made publicly available; and
- the public would have an opportunity to comment for 90 days before the land could be sold.

Currently, the Public Lands Act lacks transparency and public involvement related to the sale of public land. These factors

became very evident during the 'Potatogate' fiasco over the last few years. The public demanded greater transparency and public input in this issue and in future activities involving public rangelands. Premier Redford has also promised Albertans that there would be greater transparency in the way the government conducts its business. Dr. Brown's bill would go a long way in meeting this promise; it would be a huge step forward in the sale of public rangeland in southern Alberta.

The bill was to be presented in the legislature some time in late October or early November. Unfortunately, there has been some push back within the Alberta government about the bill. Naturalists are encouraged to support Dr. Brown's bill by:

- Encouraging environmental and conservation organizations (and their member clubs) to which you belong to support

the bill by writing letters to the minister or posting information on websites, blogs and publications;

- Getting the press to give coverage to the bill; and
- Encouraging others to write letters, emails or faxes to the minister.

Dr. Brown would welcome the opportunity to talk to individuals or organizations about the bill. He is very approachable, and Nature Alberta encourages you to contact him if you want further information or to set up a meeting.

The minister is the Honourable Diana McQueen, Minister of Environment and Sustainable Resource Development (draytonvalley.devon@assembly.ab.ca). Send a copy of any correspondence to Dr. Brown (calgary.mackay.nosehill@assembly.ab.ca). You may also want to send a copy your local MLA. Always remember to include your mailing address on your emails.

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Elk Island National Park: Rich in History and Natural Beauty

BY JIM BROHMAN

My earliest memories of Elk Island National Park (EINP) are from the 1960s, when my parents would load my siblings and me into the car for picnics beside Astotin Lake.

We were always awestruck by the first sight of the majestic, gigantic bison that dotted the sides of the road as we drove into the park, and stood at safe distances while we played, ate hotdogs and hiked the many trails within the park gates.

During the 1970s, my friends and I would regularly cross-country ski on the set trails around Shirley Lake, and since the 1980s, my wife and I regularly visit the park with our children to hike and picnic with friends.

More recently, after becoming enamored with wildlife photography, I have been frequenting the park to “photo-hike,” which has proven to be an exciting way to discover the wilderness and photograph the flora and fauna!

The creation of EINP played a key role in preventing the extinction of the Plains Bison (*Bison bison*) and decimation of Elk and Beaver populations at the turn of the twentieth century. It was a place where the remaining Plains Bison and Elk were placed and protected from further mass slaughter by many (see the historical account).

The park has continued to serve and grow as a protected ecosystem to the present day. The excellent wildlife strategies and conservation work that have been implemented there continue to ensure that animals can flourish and be relocated to help repopulate struggling ecosystems around the world.

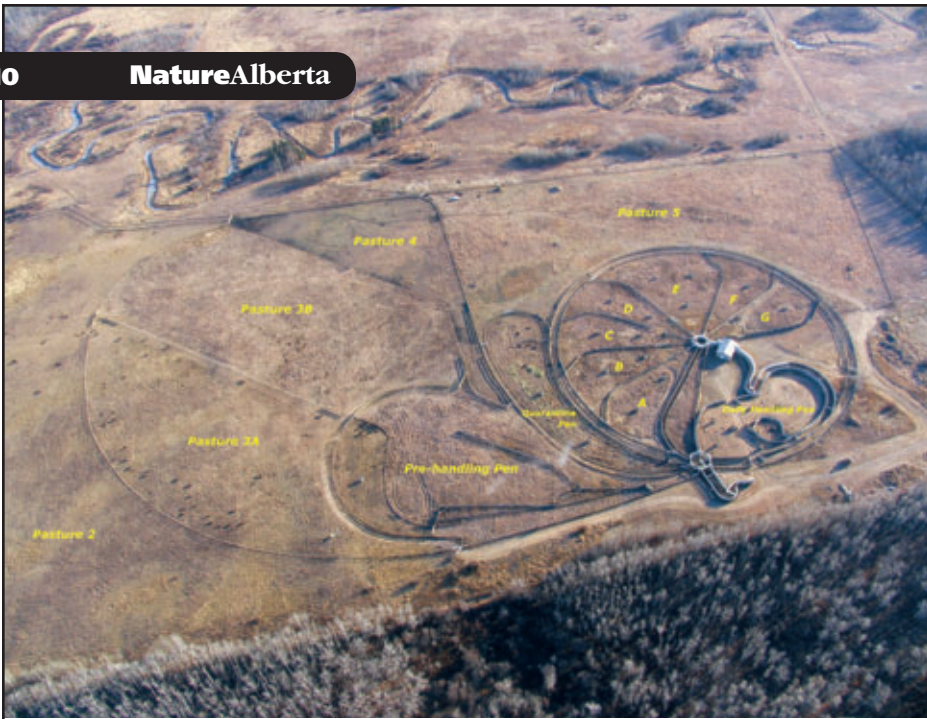
Having visited the park on many occasions, I find the staff very friendly and informative; yet the park remains natural and user-friendly (e.g. the hiking trails are well marked which is very important for those of us with a poor sense of direction!).

The following is a brief historical outline of the amazing EINP:

- **Prior to 1900:** EINP (which is part of the Beaver Hills) was inhabited by many aboriginal peoples (including the Sarcee and Cree). This rich environment sustained them for thousands of years until the European settlers arrived.
- **1800s:** Massive herds (up to 50 million in total) of Plains Bison, and to a lesser extent, Wood Bison (*Bison bison athabasca*) were slaughtered indiscriminately by American soldiers, European settlers, buffalo hunters and “sportsmen” to facilitate the movement of the buffalo-dependent natives onto reserves, make room

BISON: BUILT FOR WINTER SURVIVAL! JIM BROHMAN





THE PLAINS BISON FACILITY FROM THE AIR.

JIM BROHMAN

for domestic grazing animals, meet the demand for bison hides and kill for no good reason, respectively.

- **Early 1900s:** A few conservation-minded private citizens in the United States and Canada made efforts to save the magnificent bison which were on the brink of extinction.
- **1906:** Elk Island National Park began as Elk Park, Canada's first wildlife sanctuary.
- **1907-1909:** The Canadian government purchased some 377 Plains Bison from Michel Pablo of Montana and had them transported to Elk Park to remain there temporarily until being shipped to Buffalo National Park at Wainwright AB. Forty-five animals remained at Elk Park and they are the ancestors of all the bison at Elk Island today!
- **1908:** Elk Park was renamed Elk Island Park.
- **1913:** Elk Island Park was granted Federal park status.
- **1920:** The Government of Canada decided to ship 6,500 Plains Bison from Buffalo

National Park at Wainwright to Wood Buffalo National Park to relieve overcrowding. Unfortunately, hybridization between the two subspecies occurred, as well as widespread herd infection (the Wainwright herd carried bovine tuberculosis and brucellosis).

- **1922:** The park increased in size to accommodate the increase in big game populations.
- **1923-24:** Commercial development of EINP for visitor use occurred (including concession booths, cabin rentals, swimming areas with diving boards and even a dance hall!).
- **1930:** Elk Island Park was renamed Elk Island National Park.
- **1959:** A small herd of "pure" Wood Buffalo [Wood Bison] that had not hybridized were found in a remote location in Wood Buffalo National Park.
- **1965:** Twenty-three pure Wood Bison became part of EINP and were located on the south side of Highway 16 to keep them separated from the Plains

Bison. Unfortunately, they carried brucellosis and needed to be slaughtered after they gave birth to calves; the calves survived by being bottle-fed by park staff and are the ancestors of the present herd of Wood Bison.

- **1979:** Fire was deliberately set in a series of prescribed burns to re-establish a more balanced ecosystem (the aspen forest was overtaking the grassland),
- **1984:** Pope John Paul visited EINP.
- **1987:** Trumpeter Swans were successfully re-introduced to EINP.
- **2006:** EINP became part of the Beaver Hills Dark Sky Preserve.
- **2009-present:** Hundreds of healthy Plains Bison, Wood Bison and Elk from Elk Island have been relocated all over North America as part of ongoing wildlife management and conservation initiatives to support and sustain ecosystems in many locations.

My wife and I recently had the opportunity to tour the massive Plains Bison handling facility located near the south end of the park (see photo). This is where the bison are herded into the complex and assessed by biologists and veterinarians before they are relocated to other animal sanctuaries. Our Parks Canada host, "Jane", walked us through the intricate complex of metal corrals and passageways that were carefully designed to file the herd into single file while at the same time prevent any harm to the animals. There is a similar handling facility for the Wood Bison and the Elk. The Plains Bison facility is open to the public for a guided tour by appointment.

EINP is a "photo-hikers" dream destination all year round! The 194 square kilometer park is part of the Beaver Hills area (in Cree known as "Amisk Wuche") characterized by

rolling to hummocky landscape, including native wetlands, grasslands, aspen parkland and boreal forest. The landscape is thirty to sixty meters above the surrounding farmland, so it has a distinct climate (more snow in winter and more rain in summer). The park is home to about 400 Plains Bison, 320 Wood Bison, 700 Elk, 300 Moose and over 400 deer. There are also healthy populations of Coyotes (200), Beaver (1120) and occasional sightings of Cougars. According to park information, there are 253 bird species recorded and 137 species are known to breed here (including the Trumpeter Swan!)

The biggest decision we “hiker-photographer” types have to make when visiting the park is how to best utilize our time since there is so much to see and do! For example, you can drive along the “Elk Island Parkway” (the main road through the park) and observe bison, try to spot the very elusive Elk, or photograph the waterfowl in the large ponds adjacent to the road. However, if you really want to get a good look at the beauty of the park, increase your probability of seeing a variety of wildlife, and make an attempt at personal fitness, then the various hiking trails are highly recommended!



CROSS-COUNTRY SKIING THE PARK. JIM BROHMAN

For example, early in the morning on the Moss Lake Trail it is not uncommon to hear Coyotes howling, Moose bellowing, and Elk bugling – all within close vicinity of one another during the rutting season (September, October).

Because of the great importance of the Beaver Hills (a critical source of natural habitat plus ground and surface water) in general and EINP in particular, the Beaver Hills Initiative, which includes five rural municipalities (Beaver, Camrose, Lamont, Leduc and Strathcona) has been established to ensure that the health of the Beaver Hills can be sustained (see reference below for details; see also the Feature Story in Nature Alberta, Winter 2012, Vol 41, # 4).

The initiative is a plan created by land managers, councils and the public to address and protect

against the tremendous challenges of urbanization, and is maintained through the coordinated action of the stakeholders. The five year EINP management plan, which was initiated in 2011, can be viewed on-line (see link below). Hopefully, with proper planning and public support, this wonderful park will continue to thrive for countless future generations to enjoy.

(Jim thanks his wife Lori, and daughter Erin, for editing this article.)

References:

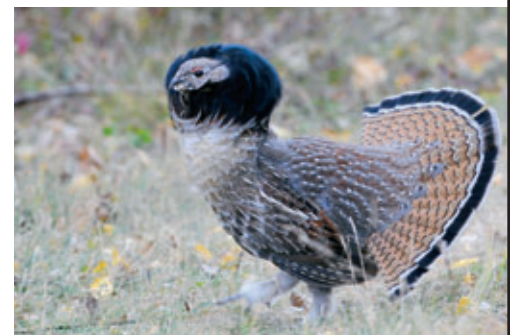
1. www.pc.gc.ca then select: “History of the herds-wood bison and plains bison”
2. The Canadian Encyclopedia (then select “Elk Island National Park”)
3. Portraits of the Bison by Wes Olson; University of Alberta Press, 2005
4. Beaverhills Initiative: www.beaverhills.ab.ca/uploads/files/ecoprimer.pdf

WARY BUT CURIOUS, A BEAVER SWIMS TOWARD THE PHOTOGRAPHER.

JIM BROHMAN



A DISPLAYING MALE RUFFED GROUSE. JIM BROHMAN



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: Giant Silk Moth

BY DEBBIE AND ALAN GODKIN

If 2007 was the year of the dragonfly – for Scarlet Darners and Damselflies, at least in our yard – then 2008 was the year of the moth. They were present in numbers too numerous to count and in a variety of shapes and colours like I had never seen before. It was impossible to get in

or out the door without letting in a few.

Among the plethora of moths was the Giant Silk Moth which I had only seen here on one previous occasion. Last spring however, over a three week period, I saw seven silk moths with wing spans that varied in size from three

inches to six inches. I had to admit that I wasn't brave enough to venture out onto the deck with all those moths fluttering about. Yet wanting to get a picture of the silk, I adjusted the setting on my camera and handed it to my fearless partner. The result was a picture of the beautiful Polyphemus Moth on the screen door, and several other colorful moths to boot.



DEBBIE GODKIN

Nature Alberta NEWS



Presentation to Nature Calgary Bird Study Group

On October 3rd, Petra Rowell, Nature Alberta Executive Director, presented a program on "Important Bird Areas (IBA) in Alberta" to the Nature Calgary Bird Study Group. This is part of an increased awareness campaign by Nature Alberta to promote IBA.

The IBA program is a global effort to identify, conserve, and

monitor sites that provide essential habitat for bird populations. Of 600 IBA sites in Canada, 48 are in Alberta (of which 36 are globally significant).

The Nature Calgary Bird Study Group meets indoors on the first Wednesday of each month from September through May. Its goal is to encourage birding in

the Calgary area and beyond by helping local birders develop their knowledge and skills. Its members are active local birders of all skill levels who are keen to share their knowledge and experiences. Please see the Bird Study Group website <http://naturecalgary.com/bsg/> for information on the group, its field trips and its other activities.

Beaver Hills Biosphere Reserve

In September, Nature Alberta provided a letter of support for the Beaver Hills Biosphere Reserve submission. In response, Dr. Guy Swinnerton (Chair of the Beaver Hills Initiative Protected Areas Working Group) wrote Nature Alberta, saying:

"Thank you so much for writing such a strong letter of support on behalf of Nature Alberta for the Beaver Hills Biosphere Reserve nomination to the U.N. Receiving such an unequivocal endorsement from a province-wide organization will certainly assist in strengthening the case for a successful nomination."

Nature Alberta wishes the Initiative great success in going forward. Dr. Swinnerton promises to, "keep you informed as to

news of progress of the nomination as it proceeds through the various national and international review stages."

For more on the Beaver Hills Initiative, see the Feature Stories in *Nature Alberta*, Winter 2012.



NA Website Overhaul

Nature Alberta has begun overhauling its website to better serve both members and the public. Because of limited resources, the work will continue well into 2013. As a result, sections of the website may not be available from time to time. Nature Alberta regrets any inconvenience this may cause people, but the updating and changes are very important and need to be done.

Farewell: A Letter from Jesse Hitchcock



"To all of the fantastic stewards I have had the pleasure of working with over the last few years:

"Thank you so much for all of your contributions to and support of the Living by Water Project and Nature Alberta! It has been an amazing experience getting to know all of you, learn from you, and help support your stewardship efforts. As of September 1, 2012, I will be on Prince Edward Island pursuing graduate studies in biology, and although I am extremely excited about my upcoming opportunities

I will definitely miss Living by Water and the network of people that I have gotten to know over the years.

"That being said, I would like to introduce Brianne Lovstrom who will be coordinating the project part time. Brianne and I worked together as Shoreline Advisors for Living by Water in 2009 and 2010, so she is familiar with the program and I know that you will enjoy working with her!

"I hope that you will continue to participate in the program and support Nature Alberta in the years to come. It is this community of Albertans who are passionate and driven to protect our natural history that will create change, and I can't wait to see it happen! Thanks again for your support and enthusiasm."

-- Jesse Hitchcock

Update

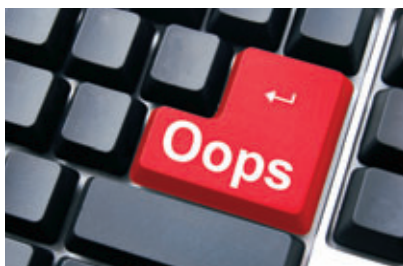


SUMMER 2012 REVIEW

This was a great year for Living by Water (LbyW), one of Nature Alberta's major projects. Six new lakes were added in 2012, which kept the summer shoreline advisors very busy! In total, our shoreline advisors were able to complete 135 Homesite Consultations between the months of June and August.

Much of this growing interest may be related to the excellent media opportunities the program gained. LbyW was featured on TV in "Let's Go Outdoors", Shaw TV and in the Sylvan Lake News. Thanks to our sponsors, we were also able to produce some important training videos in house which will assist the growing success of the program next year. Currently, we have a waiting list of residents for next season. Our focus this fall is to raise funds for next season.

LbyW has a new Program Coordinator: Brianne Lovstrom. Past coordinator, Jesse Hitchcock, has returned to her university studies. If you are interested in having a Homesite Consultation, or would like to have the program offered at your lake, please e-mail Brianne Lovstrom at briannel@naturealberta.ca.



CORRECTION

On page 14, in the Summer 2012 edition of *Nature Alberta*, the first name of one of the volunteers was misspelled. It should be Shama Noone. Our apologies, Shama!

SUPPORT

While volunteers provide a huge service to Nature Alberta, our organization also needs financial resources to operate and provide the services and benefits that we do for Albertans. Please consider supporting us with whatever you can afford. Your support means a great deal to the conservation of nature in Alberta.



Eyes on IBAs

Sixth in a Series

Saskatoon Island IBA

BY ERIN CAMPBELL

I grew up in Grande Prairie in the 80s and 90s, prior to the big boom that resulted in the city's population expanding dramatically in the 2000s as people from all over Canada moved there for work.

So for most of my childhood, the city was pretty small, and a lot of our city and provincial parks were grossly underused which, as a child, was an amazing way to experience the outdoors.

My mother made sure we kids were outside as much as possible year-round, and my family's favorite place to spend our summer days was at Saskatoon Island Provincial Park. The park is also a part-time home to nesting and migrating Trumpeter Swans, giving Grande Prairie the nickname "Swan City", complete with swan statue and all.

When I was a child, we could spend all day at "the lake", as we called it, and barely see anyone else there. We often had the whole beach to ourselves. My

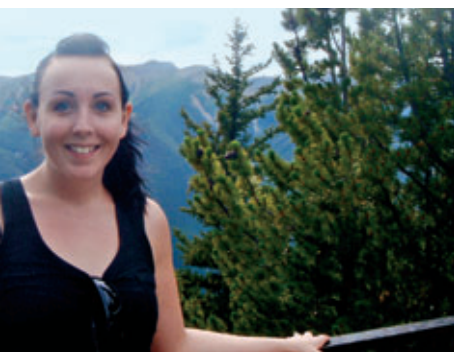
brothers and I would spend most of our time along the shore with old ice cream pails collecting strange bugs out of the water and the always-plentiful leeches right off our bodies after going for a swim.

We also spent a lot of time biking and walking the expansive footpaths in the area, stopping at every lookout point, hoping to spy any animals we could. My mother had a penchant for birds, particularly ducks and geese, but she also loved the Trumpeters, which could be spotted at many of the look-out points along the way. Watching them, I understood how the adjective 'majestic' came to be associated with the swan. Their calmness juxtaposed perfectly against the frenetic diving and squabbling of the

ducks; they were like royalty out on the lake as they serenely dipped their heads into the water searching for food.

As Grande Prairie grew, so did residential development. Whole

A PAIR OF TRUMPETER SWANS. CHUCK PRIESTLEY



IBA COORDINATOR ERIN CAMPBELL.



SASKATOON LAKE AND SWANS IN OCTOBER. PETER CRAWFORD

families that had moved to the city for work had to temporarily live in campsites because there was a housing shortage. We lived across the street from a man-made lake surrounded by farmland that was eventually sold off in parcels and developed into housing during this time. We watched it happen bit by bit, year by year, until the entire lake was encircled with large houses that had backyards opening up right onto the shores – shores that had previously been homes and nesting grounds to large numbers of Canada Geese, ducks, Red-winged Blackbirds, and a single pair of Trumpeters that returned every year. The Trumpeters stood out among the Mallards, American Coots, and geese, and could often be seen quietly swimming side-by-side, alone with their cygnets.

We used to go out onto the dock in the rain and stand there with our eyes closed and just listen to the sounds of the birds out on the water, noisy and excited by

the falling rain. Year after year, fewer geese and ducks returned to the lake to nest, and eventually our single pair of Trumpeters also stopped coming – at least, until probably about five to eight years ago, when a pair again began nesting on the lake.

My family had sort of adopted these swans. We felt connected to the whole community of water birds in the area, but while “the geese” and “the ducks” we knew were entire populations, “the swans” were individuals that we truly missed.

Saskatoon Island is busier than it ever was when I was growing up, and seeing the difference in the amount of recreation on and around the lake between then and now reminds me of the lake across the street from my childhood home. The IBA program is so important in areas with high levels of recreation, but I wonder if it is enough. The fact that the IBA designation doesn’t

come with the protection of a provincial or national park worries me. Even though Saskatoon Island is a provincial park and therefore has a system beyond the IBA Program in place to help preserve it, I have seen first-hand how delicate shoreline ecosystems really are.

We should feel not only fortunate that we are still afforded the sights and sounds of nesting birds in and across Alberta, but also protective of these areas. Saskatoon Island is surrounded by farmland that is slowly being converted into residential and commercial properties. If we don’t take the steps now to preserve and protect our wildlife and local biodiversity, we may lose it forever.

This summer, I visited the lake across from my childhood home, and it seemed louder and more dynamic than I remembered it to be, but it was loud with the sounds of people, not birds. So far, Saskatoon Island has managed

to hold on despite increased recreation, but I can't help but wonder how long it will stay that way if people don't respect the area.

Cleaning up after ourselves is one thing, but we must also remember that our presence disrupts other aspects of the ecosystem. Noise, water recreation, camping, pollution, and a reduction in wild land all affect these unique ecosystems, and it is our

responsibility to patronize our parks in a way that allows these protected areas not merely to survive, but also to thrive.

So next time you take a walk outside, take a moment to close your eyes and listen to the buzzing sounds of life all around you. I can tell you first-hand that you will have a greater appreciation for the natural world if you make the effort to hear what it has to say.

Important Bird Areas (IBAs) is a program of BirdLife International (BLI); the Canadian BLI partners are Nature Canada and Bird Studies Canada. Nature Alberta, as Nature Canada's provincial affiliate, is the IBA lead in Alberta. The three pillars of the IBA program are identification, conservation and monitoring

A BANDED TRUMPETER SWAN IN THE IBA. CHUCK PRIESTLEY



PCESC

www.pcesc.ca

The 10th Prairie Conservation and Endangered Species Conference will be held in Red Deer AB February 19 – 22, 2013. The theme is "Engaging People in Conservation". This major conference, held only every three years, is always an excellent event. For those who may be interested, the conference website is now online at: www.pcesc.ca. Nominations for the Prairie Conservation award are also open until January 11, 2013. The conference is looking for volunteers; if you are interested in helping out, contact Myrna at mpearman@telus.net.



JOHN WARDEN

Close to Home: Nature Photography in Alberta

“They Sound like Lions!”

BY JOHN WARDEN

The girl's voice came to me from the other side of the parkway. She was maybe eight or nine and was standing on the edge of the road, watching a herd of Bison at Elk Island National Park.

She was right. The roaring bellows of the big bull Bison did have the throaty, coughing kind of sound we have come to associate with lions.

It was early August and the Bison rut was on. A couple of the big bulls in the small herd by the road side were acting very aggressive,

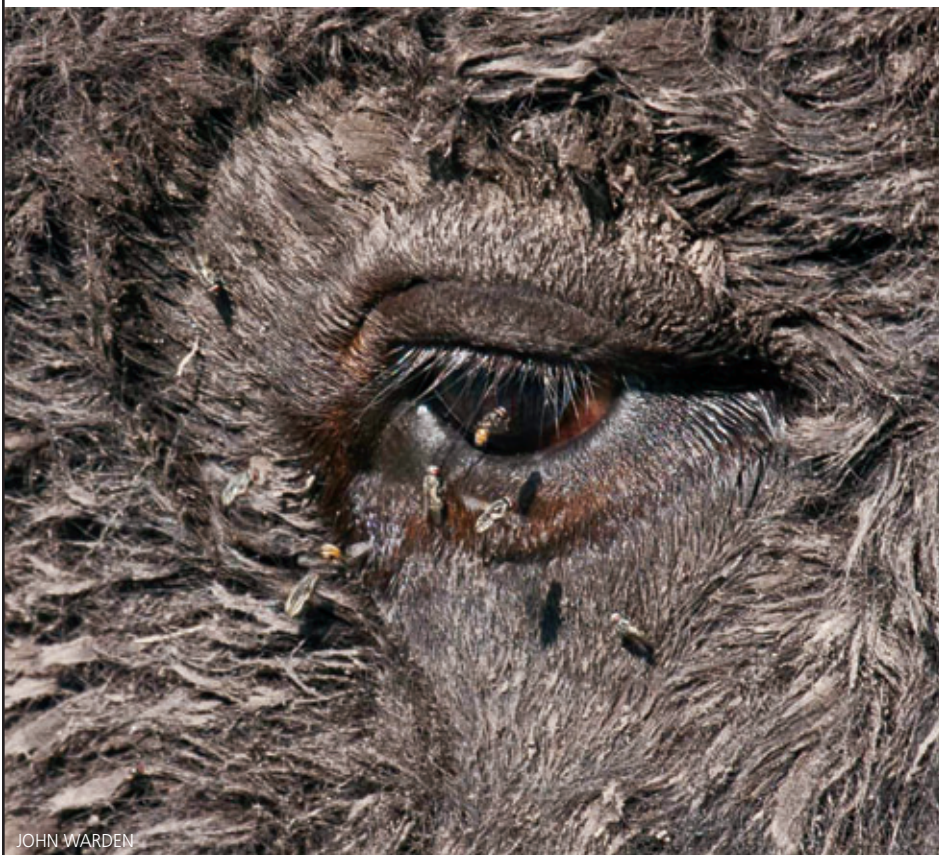
wallowing, shaking their heads, lip-curling and pawing at the ground. Then they'd hunch their massive shoulders, open their mouths, stick out their tongues and blast out a lion-roar which at times also sounded like a guttural, flatuluous, wet burp.

The sounds and actions of the bulls suggested to me that the inside of their car would have been a much safer place for the girl and her parents. Bison appear to be cow-like and docile, but despite their size, they are very quick and agile. During the rut, the bulls like nothing better than displaying their power and vigor.

I was out to the park nearly every day for a couple of weeks. One morning, chatting with another park visitor as we watched the bulls roar and snort, he commented that he had driven all the way from Vancouver and the only wildlife he'd seen were two deer in the mountains. Watching the Bison rut at Elk Island, he was being treated to one of nature's spectacles.

Paul Kane the great Canadian artist, painter and adventurer, on leaving what was then Fort Pitt (located north of present day Lloydminster on the North Saskatchewan River), in late September 1846 on horseback for Fort Edmonton, describes in his autobiography¹, the spectacle he witnessed along the way.

¹Kane, Paul, (1968), *Wanderings of an Artist among the Indians of North America*, Charles E. Tuttle Company



JOHN WARDEN



JOHN WARDEN

During the three days that it took us to reach Edmonton House (from Fort Pitt) we saw nothing else but buffaloes, covering the plains as far as the eye could reach and so numerous that at times they impeded our progress, filling the air with dust almost to the point of suffocation.

Returning to Fort Edmonton in November 1847, Kane describes seeing thousands of Bison around Fort Edmonton and as part of a Bison hunt days later, witnessed, by his estimate, ten thousand Bison within several miles of the fort.

As I chatted with the visitor from Vancouver, a big bull walked across the prairie in front of us, blowing and snorting. "He sounds like a steam train" said the visitor. Lions, steam trains and flatuluous burbling, the Bison rut today, though smaller in numbers than in Paul Kane's time, it still is a raw

and primal spectacle of sound and sight.

I told the man of my own Bison adventure from a previous August. I was out on foot by one of the ponds along the parkway, trying to get a shot of a Trumpeter Swan. It was early in the morning, quiet, and the swan was calmly cruising along the shoreline like a breath of mist floating on the water. It was a beautiful moment that was percussively interrupted by the bellow of a bull Bison to my right. I couldn't see him, but he sounded close and very assertive. This was followed immediately by an answering roar to my left, just as close and perhaps a bit more aggressive. As one would bellow, the other answered getting louder and, it seemed to me, closer. And there I was, stuck in the middle. With heavy crashing in the bush coming my way, I still couldn't see either bull, but, with discretion

fueling my feet, I quickly returned to my car. I'd got a nice shot of the swan though.

Whereas swans are elegant, graceful and beautiful, Bison are massive, blocky and often covered with mud, slobber and flies. Bison provide challenges and opportunities for the nature photographer. I experimented with rim lighting and texture, focused in-tight on the flies feeding around their eyes (see photo) and then worked on action shots, trying to find the best combination of color, light, and composition to convey the powerful emotions of the rut. After many days and many hundreds of shots, I found the image that I think captures the art of the Bison. The magnificent spirit of their primordial urge is best expressed through the line of their massive shoulders, the heaviness of their broad forehead and through the animation of their triangular face.



JOHN WARDEN

Paul Kane is described by J. G. MacGregor in the introduction to the 1968 new edition of *Wanderings of an Artist* as the “father of Canadian art.” Kane spent nearly two years, trying to capture the wild spirit of the

Canadian west and several of his bison sketches and paintings are from the area around Fort Edmonton. We can get a taste of that wild spirit, and a sense of the origins of Canadian nature art, by viewing the Bison herds

at Elk Island, Waterton or Wood Buffalo National Parks. Bison are a symbolic icon of our Alberta heritage and a modern day conservation success story. Not only are they ‘close to home’, but they’re part of our spirit.



www.jwardenphotography.com

John Warden’s website (www.jwardenphotography.com) is definitely worth a visit for excellent photos of wildlife and landscapes in Alberta and beyond. John also posts articles on his blog (<http://jwardenphotography.blogspot.com/>) from previous *Nature Alberta* magazines.

Drop in and say hello!

Lake Beaumaris

By Andrea Potvin

Photos © Jim Struthers

J.B. (Jim) Struthers
Beaumaris Lake Resident,
Photographer,
Nature Enthusiast and
Nature Alberta Member

Lake Beaumaris is a hidden gem in the Edmonton area for nature lovers. It is the largest of over 60 storm water lakes maintained by the City of Edmonton. Lake Beaumaris is situated north of 153 Avenue and east of Castle Downs Road, behind the Lakeside Landing Mall.



I've known about Lake Beaumaris since I was a little girl. It wasn't until this year when a family friend, Jim Struthers, emailed me pictures of some ducklings that I realised what a valuable natural space Lake Beaumaris truly was. Recently, Jim and I got together to discuss the lake and his photography.

Jim Struthers

Jim, or J.B. Struthers, is a retired game warden and worked in Alberta's Fish and Wildlife Division for over 33 years. He writes a monthly column in Alberta Outdoorsmen Magazine *Black and White*, which considers wildlife and fisheries related enforcement issues. His fiction, often related to game warden work, appears in that magazine and others in Canada and the US. His previous employment as a game warden has given him a good grasp of the evolving legislation intended to conserve and share our fish and wildlife resources. His writings encourage him to keep current with that law and to follow higher profile cases through the courts.

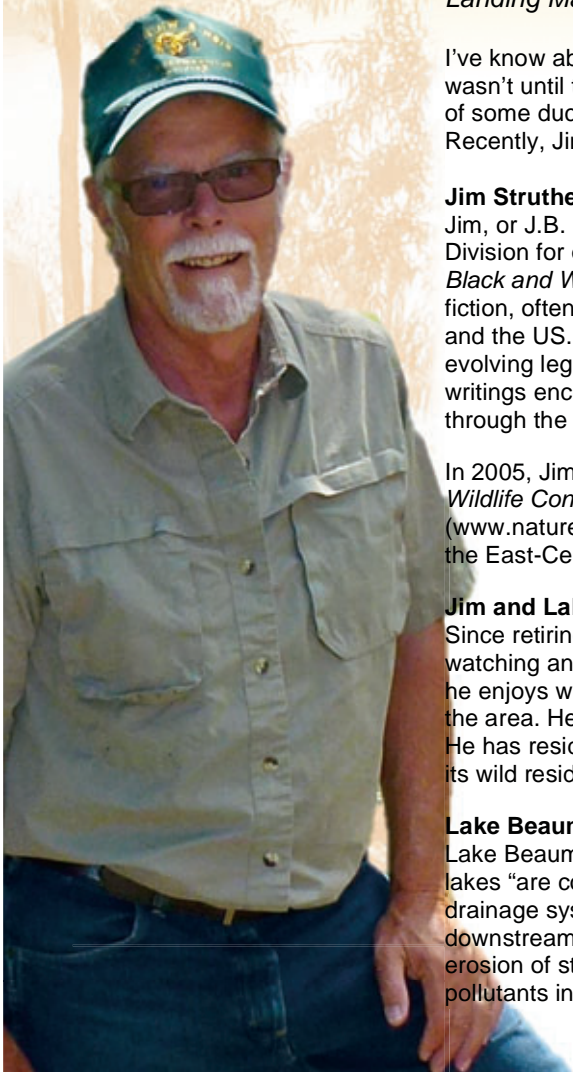
In 2005, Jim was one of many experts involved in writing *Fish, Fur & Feathers: Fish and Wildlife Conservation in Alberta 1905-2005* which is available in the Nature Alberta Store (www.naturealberta.ca). During the past few years he has also participated peripherally in the East-Central Alberta Turkey Vulture Study.

Jim and Lake Beaumaris

Since retiring in 1997 Jim has spent time traveling, hiking, camping, angling, writing, watching and photographing wildlife especially around Lake Beaumaris. In his spare time, he enjoys walking around the lake, close to his current residence to photograph wildlife in the area. He came across Lake Beaumaris 18 years ago while visiting Castledowns Library. He has resided near the lake for the past 8 years and has grown very fond of the area and its wild residents.

Lake Beaumaris, A Storm Lake

Lake Beaumaris is one of over 60 storm water lakes in the Edmonton area. Storm water lakes "are constructed water bodies which comprise part of an urban area's storm water drainage system. They help store water from the city's storm drainage system to prevent downstream flooding, they detain and slow the rate of runoff to reduce potential downstream erosion of streams, and they help improve water quality by allowing sediments and other pollutants in storm water to settle" (Kipp, 2006).



Lake Beaumaris, A Storm Lake Continued...

In addition to preventing flooding, storm water lakes have the potential to develop into thriving ecosystems in our communities. Lake Beaumaris is a prime example of a lake that has developed into a home for our feathered, furred and finned friends as well as a variety of plant life despite its varied water qualities.

Life Around Lake Beaumaris

Fish (sticklebacks and fathead minnows) thrive in the lake. Occasionally, unwanted pond fish (goldfish and koi) are discarded in Beaumaris. There is also evidence crayfish have become established in the lake. The presence of fish brings several varieties of grebes, mergansers, cormorants, loons (one day, during the spring migration, Jim counted 26 loons on the lake at one time), gulls, herons, and the occasional kingfisher, although only the pied-billed and red-necked grebes nest here. Pelicans visit to feed occasionally. Also, crows, magpies, blue jays and grackles, along with a number of songbirds, nest nearby. They forage along or near the lake.

The waters support cattails and bull rushes as well as several grasses and sedges. That growth provides nesting cover for red-winged blackbirds, mallards, sora rails, coots, grebes, ruddy ducks and geese. These plants also provide food and cover for the occasional muskrat. The vegetation serves to filter the water, taking many of the pollutants as food. In 2011, a beaver spent a couple of weeks on Beaumaris. He felled several trees before he was caught and moved to the North Saskatchewan River. In total, Jim has observed a total of 96 different bird species at Lake Beaumaris with 7 more species noted by others.

Lake Beaumaris Welcomes You

Aside from observing the lake's natural beauty, people who live in the community can partake in a variety of activities in both the summer and winter months. On a warm summer evening hundreds of walkers, joggers, cyclists, in-line skaters and skateboarders, enjoy Beaumaris, often more than once during an evening. Some are there simply for the exercise, others to see the birds. Kids net 'minnows' or feed the ducklings and gulls. Artists and shutterbugs frequent the lake to capture the scenery and/or the critters, graphically. During the winter people often cross country ski and snowshoe on the snow-covered ice surface. Occasionally the ice is cleared for skating.

Professional photographers often bring wedding parties to the lake for photos. Many visitors return again and again, though it is less crowded during the early morning hours. Remote controlled boats are occasionally operated on the lake.

The city has developed the area to accommodate its many visitors: there are 34 park benches, for those wanting to rest or enjoy the scenery; they have placed and regularly empty 17 garbage containers; at the southern extremity, there is a concrete boat launch (primarily used by city personnel); there are 4 railed lookouts from which to view the lake; a couple of lakeside boardwalks; several exposed aggregate retaining walls; not to mention many trees and flowering shrubs. The concrete walkway is well lit with 122 lamps.



Photos © Jim Struthers

Beaumaris Lake Safety

The city restricts recreational use of the storm water lakes because it cannot control the quality of the water in those lakes. Water quality deteriorates markedly during and following rainstorms and remains poor for approximately 72 hours after the storm. For public safety, any activity that may result in direct contact with water in storm water lakes is usually restricted. During heavy rains, all manner of things dissolve and wash into the lakes including (but not limited to): road grime (like salt, oil, silt and gasoline residue), fertilizers and pesticides used for lawn and garden care and excrement from pets kept or walked around the lake. Additionally, the city applies herbicides to the lakes to control algae.

"Living near urban lakes" – Sarah Weaver Kipp (pg. 84, ch. 7 – summary) outlines a few things to keep in mind when considering activities along any storm water lake:

1. Be aware of the potential for sudden changes in lake levels if you live near a stormwater lake.
2. Avoid any activity that involves potential direct contact with the water in urban lakes
3. If your municipality permits access to the ice during winter, remember that since an urban lake is part of the stormwater drainage system, it has a flow which continues through the winter. Ice will be thinner at the inlets and outlets.

For more information on storm water lakes in Edmonton, you can contact the City of Edmonton. A suggested reading is "Living Near Urban Lakes: Your Guide to Everyday Living in Urban Lake Communities" by Sarah Weaver Kipp. Jim keeps an online database of a few of his best pictures. These can be accessed at: <http://bit.ly/O5UQvU>

Unofficial Beaumaris Lake Bird List

American Coot (<i>Fulica americana</i>)	Common Tern (<i>Sterna hirundo</i>)	Purple Finch (<i>Carpodacus purpureus</i>)
American Crow (<i>Corvus brachyrhynchos</i>)	Dark-eyed [slate-coloured] Junco (<i>Junco hyemalis</i>)	Redhead (<i>Aythya americana</i>)
American Kestrel (<i>Falco sparverius</i>)	Double-crested Cormorant (<i>Phalacrocorax auritus</i>)	Red-breasted Nuthatch (<i>Sitta canadensis</i>)
American Robin (<i>Turdus migratorius</i>)	Downy Woodpecker (<i>Picoides pubescens</i>)	Red-necked Grebe (<i>Podiceps grisegena</i>)
American Tree Sparrow (<i>Spizella arborea</i>)	Eared Grebe (<i>Podiceps nigricollis</i>)	Red-tailed Hawk (<i>Buteo jamaicensis</i>)
American Widgeon (<i>Anas americana</i>)	Eastern Kingbird (<i>Tyrannus tyrannus</i>)	Red-winged Black Bird (<i>Agelaius phoeniceus</i>)
Baltimore Oriole (<i>Icterus galbula</i>)	European Starling	Ring-billed Gull (<i>Larus delawarensis</i>)
Barn Swallow (<i>Hirundo rustica</i>)	Forster's Tern (<i>Sterna forsteri</i>)	Ring-necked Duck (<i>Aythya collaris</i>)
Belted Kingfisher (<i>Ceryle alcyon</i>)	Franklin's Gull (<i>Larus pipixcan</i>)	Rose-breasted Grosbeak (<i>Pheucticus ludovicianus</i>)
Black-billed Magpie (<i>Pica pica</i>)	Gadwall (<i>Anas strepera</i>)	Ruby-crowned Kinglet (<i>Regulus calendula</i>)
Black-capped Chickadee (<i>Parus atricapillus</i>)	Great Blue Heron (<i>Ardea herodias</i>)	Ruddy Duck (<i>Oxyura jamaicensis</i>)
Black-crowned Night- Heron (<i>Nycticorax nycticorax</i>)	Great Horned Owl (<i>Bubo virginianus</i>)	Sandhill Crane (<i>Grus canadensis</i>)
Black Tern (<i>Chelidonias niger</i>)	Greater Yellowlegs (<i>Tringa melanoleuca</i>)	Solitary Sandpiper (<i>Tringa solitaria</i>)
Black Scoter (<i>Melanitta nigra</i>)	Green-winged Teal (<i>Anas crecca</i>)	Song Sparrow (<i>Melospiza melodia</i>)
Blue Jay (<i>Cyanocitta cristata</i>)	Hairy Woodpecker (<i>Picoides villosus</i>)	Sora (<i>Porzana carolina</i>)
Blue-winged Teal (<i>Anas discors</i>)	Hooded Merganser (<i>Lophodytes cucullatus</i>)	Spotted Sandpiper (<i>Actitis macularia</i>)
Bohemian Waxwing (<i>Bombicilla garrulus</i>)	Horned Grebe (<i>Podiceps auritus</i>)	Surf Scoter (<i>Melanitta perspicillata</i>)
Bonaparte's Gull (<i>Larus philadelphia</i>)	House Finch (<i>Carpodacus mexicanus</i>)	Swainson's Thrush (<i>Catharus ustulatus</i>)
Bufflehead (<i>Bucephala albeola</i>)	House Sparrow (<i>Passer domesticus</i>)	Townsend's Solitaire (<i>Myadestes townsendi</i>)
Canada Goose (<i>Branta canadensis</i>)	House Wren (<i>Troglodytes aedon</i>)	Tree Swallow (<i>Tachycineta bicolor</i>)
Canvasback (<i>Aythya valisineria</i>)	Lesser Scaup (<i>Aythya affinis</i>)	Tundra Swan (<i>Cygnus columbianus</i>)
Cape May Warbler (<i>Dendroica tigrina</i>)	Long-tailed Duck [Old Squaw] (<i>Clangula hyemalis</i>)	Western Tanager (<i>Piranga ludoviciana</i>)
Cedar Waxwing (<i>Bombicilla cedrorum</i>)	Mallard (<i>Anas platyrhynchos</i>)	Western Wood-Pewee (<i>Contopus sordidulus</i>)
Chipping Sparrow (<i>Spizella passerina</i>)	Merlin (<i>Falco columbarius</i>)	White-breasted Nuthatch (<i>Sitta carolinensis</i>)
Cinnamon Teal (<i>Anas cyanoptera</i>)	Nashville Warbler (<i>Vermivora ruficapilla</i>)	White-crowned Sparrow (<i>Zonotrichia leucophrys</i>)
Clay-colored Sparrow (<i>Spizella pallida</i>)	Northern Flicker [Yellow-shafted] (<i>Colaptes auratus</i>)	White-throated Sparrow (<i>Zonotrichia albicollis</i>)
Cliff Swallow (<i>Petrochelidon pyrrhonota</i>)	Northern Shoveler (<i>Anas clypeata</i>)	Wilson's Phalarope (<i>Phalaropus tricolor</i>)
Common Goldeneye (<i>Bucephala clangula</i>)	Northern Flicker [Yellow-shafted] (<i>Colaptes auratus</i>)	Wilson's Warbler (<i>Wilsonia pusilla</i>)
Common Grackle (<i>Quiscalus quiscula</i>)	Northern Shoveler (<i>Anas clypeata</i>)	Yellow Warbler (<i>Dendroica petechia</i>)
Common Loon (<i>Gavia immer</i>)	Osprey (<i>Pandion haliaetus</i>) May 3, 2012	Yellow-bellied Sapsucker (<i>Sphyrapicus varius</i>)
Common Merganser (<i>Mergus merganser</i>)	Pied-billed Grebe (<i>Podilymbus podiceps</i>)	Yellow-rumped Warbler [Myrtle] (<i>Dendroica coronata</i>)
Common Nighthawk (<i>Chordeiles minor</i>)	Pileated Woodpecker (<i>Dryocopus pileatus</i>)	Blackpoll Warbler
Common Redpoll (<i>Carduelis flammea</i>)	Pine Grosbeak (<i>Pinicola enucleator</i>)	California Gull
Common Tern (<i>Sterna hirundo</i>)	Northern Flicker [Yellow-shafted] (<i>Colaptes auratus</i>)	Eastern Phoebe
Dark-eyed [slate-coloured] Junco (<i>Junco hyemalis</i>)	Northern Shoveler (<i>Anas clypeata</i>)	Greater Scaup
Common Loon (<i>Gavia immer</i>)	Osprey (<i>Pandion haliaetus</i>) May 3, 2012	Hoary Redpoll
Common Merganser (<i>Mergus merganser</i>)	Pied-billed Grebe (<i>Podilymbus podiceps</i>)	Lincoln's Sparrow
Common Merganser (<i>Mergus merganser</i>)	Pileated Woodpecker (<i>Dryocopus pileatus</i>)	Pintail
Common Loon (<i>Gavia immer</i>)	Pine Grosbeak (<i>Pinicola enucleator</i>)	
Common Merganser (<i>Mergus merganser</i>)	Pine Siskin (<i>Carduelis pinus</i>)	
Common Nighthawk (<i>Chordeiles minor</i>)	Purple Finch (<i>Carpodacus purpureus</i>)	
Common Redpoll (<i>Carduelis flammea</i>)	Redhead (<i>Aythya americana</i>)	



FEATURE ARTICLE

Which were the Best Years for Mountain Bluebirds on Calgary Area Bluebird Trails?

COMPARISON STATISTICS 1973-2011

BY DON STILES

In recent years, Calgary Area Nestbox Monitors (a.k.a. as Calgary Area Bluebird Trail Monitors) have reported that “there aren’t as many Mountain Bluebirds around as there used to be”. This article attempts to quantify this to learn if it is true or not.

Statistics were compiled for several long term Calgary area bluebird trail monitors, as follows:

1. Harold Pinel, Chain Lakes to Sundre to Didsbury - 1973-1978
2. Blake Stillings, North of Cochrane to Water Valley - 1978-1990
3. George Loades, Jumping Pound and Priddis - 1985-2009
4. Ray Woods, Elkton - 1979-2011
5. Don Stiles, East Didsbury - 1977-2011
6. All Monitors – West of Nanton to Sundre to east of Olds - 1979-2011

Data for first years of # 2, 3 and 5 were incomplete and were not included in the compilation. Data

for # 6 includes # 1, 2, 3, 4, and 5 above. See the Appendix for more details on each trail.

Most Calgary area Mountain Bluebird trails are in the foothills southwest and northwest of Calgary. A few trails east of Didsbury and Olds and in the Drumheller area are at the beginning of the parkland in central Alberta.

METHODOLOGY:

Various statistics were compiled including those for eggs, young and young fledged for Mountain Bluebirds and Tree Swallows. A “Calculated Statistics” portion followed the raw data.

It soon became apparent that the best statistic to use to answer the question in the title was the ratio

“Young Fledged to Boxes”. This normalizes the changes in the number of boxes used over the years.

A table was compiled showing a compilation of the number of boxes, number of Mountain Bluebirds and Tree Swallows fledged, for All Monitors, and the calculated statistic “Young Fledged per Box” for # 1 to 6 above.

Important Note: For Nature Alberta e-version readers, to view the table, please see the Microsoft Excel attachment, “Feature Story charts & table.” If you are a reader who gets a hard copy of Nature Alberta, you can request an emailed Microsoft Excel copy of the charts & table document by emailing na@naturealberta.ca. This is necessary because the width

Don Stiles is a long-time Nature Alberta Director who retired from the Board in 2012. He is very well known throughout Alberta for his many past and present volunteer activities and has received recognition from Nature Alberta through “Volunteer of the Year” awards (2001, 2002), the Loran Goulden Award (1996) and the Honourary Lifetime Membership Award (2006).

of the table and colour-coding of the charts made printing the data impossible. We hope this is not too inconvenient. The summary of the data (below) will still give readers the relevant information.

Long term averages for Young Fledged per Box for each trail were then calculated. Values were then highlighted in Red for each year that was >20% above the long term average, suggesting a good year for Mountain Bluebirds or Tree Swallows. This was also done, in Orange, for values >15% above the long term average, and in Yellow for those values 10% above the long term average. This defines the very best years in Red, the second best in Orange and finally the third best in Yellow.

RESULTS FOR TABLE 1:

The best years, with the majority of the trails in red or orange (>15% above average) were as follows:

Mountain Bluebirds: 1984 to 1986, 1988 to 1993, 1998 to 2000, and 2006 – mostly years 2000 and before. The two best years were 1988 and 1989.

Tree Swallows: 1974 to 1976, 1978 to 1983, 1997, 2003, 2006 to 2009 and 2011. Tree Swallows have been doing very well in recent years, except for 2010.

In general, years which were good for Mountain Bluebirds were poor for Tree Swallows and vice versa. In occasional years such as 2010 neither species did well. Only the year 2006 showed good results for both species.



THE GRAPHS:

Another method to describe “which were the best years for Mountain Bluebirds” was to plot the parameter “Young Fledged per Box” for each of Mountain Bluebirds and Tree Swallows graphically (as per the Excel attachment). In general, the trails follow the same general pattern, but not always, indicating variation sometimes by area. Further comparisons could be made by comparing different trails, but these evaluations are better left for another article.

RESULTS FROM THE GRAPHS:

The graphs more dramatically show the changes from one year to the next. Especially notable are the dramatic increases in Mountain Bluebirds in 1984 and 1988 (see anecdotal evidence below). Also notable is their decline after 2006 and their low levels since.

Peak years for Mountain Bluebirds were 1984, and 1988 to 1993, with secondary best years 1985, 1986, 1998 to 2000 and 2004 to 2006.

Tree Swallows were having good years most years from 1974 to 1980 and most years from 2006

TREE SWALLOWS ARE VERY ATTRACTIVE BIRDS – THE UPPER PARTS A GLOSSY STEEL-BLUE WITH GREENISH REFLECTIONS. JACK BORNO





JACK BORNO



JACK BORNO

to 2011. A secondary peak was noted from 1996 to 1998. The reason for the very poor year for Tree Swallows in 1999 is noted below (item c).

Nearly all years when Mountain Bluebirds were having a good year, Tree Swallows were not having a good year, and vice versa.

ANECDOTAL EVIDENCE:

Three examples from Calgary Area Bluebird Trail Monitors Annual Reports where there were dramatic differences in the number of Mountain Bluebirds or Tree Swallows are listed below:

- a) 1984 was the first year that a major increase was noted in the Mountain Bluebird population. Here is an excerpt from that year's report:

"1984 was a banner year for [Mountain] Bluebirds, primarily due to an early spring with the month of May being unseasonably warm. This allowed an early start in Bluebird nesting and a dramatic increase over 1983 in Bluebirds, from 214 first broods to 328 (53%). Part of this increase (15% more boxes) was accounted for

by monitors increasing their boxes. Tree Swallows showed only a modest increase of 10% in number of nests, less than the increase in number of boxes.

"Blake Stillings reported phenomenal success on one section of trail with 52 out of 56 boxes having Bluebirds. Of these, 45 boxes were successful. It was not immediately obvious why this loop should have so many more Bluebirds than adjacent loops as the habitat looks much the same." (*As I recall, these boxes were on T280, both east and west of Westbrook School which is on Hwy 22 16 km [10 miles] north of Cochrane. Blake Stillings took me and Eileen Dyck out to see this phenomenon. Eileen was a summer student working that season for Bryan Shantz of Ellis Bird Farm on Project Nestbox Alberta. -- Don Stiles*)

- b) 1988, a very good year for Mountain Bluebirds:

"1988 marked the first year on Calgary Area Bluebird trails where the number of Bluebirds fledged was greater than the number of

Tree Swallows. There was a warm, dry spring which gave Bluebirds an early start and allowed time for many second broods. Often these had 5 or 6 eggs rather than the usual 4 for second broods. They were also much more successful than usual."

Mountain Bluebirds fledged were greater than Tree Swallows only for the years 1988 through 1993, and 1999.

- c) 1999, a very poor year for Tree Swallows:

"Many Tree Swallow eggs hatched around June 20. However, cold, wet weather from June 24 to 26 was followed by heavy rain and cold the next weekend. There was at least one day in early July which had a record low temperature of about 3° C in the city, and a record low 'high' temperature of only about 8° C; it was colder in outlying areas. These conditions prevented insects both from hatching or becoming airborne, thus severely curtailing the food supplies for Tree Swallows, who feed exclusively on flying insects, and for



JACK BORNO



JACK BORNO

Bluebird second broods. The severe conditions resulted in many nests with a very high percentage of dead young Tree Swallows, particularly in the Foothills areas. Those trails east of Highway 2 fared a bit better, but dead young were still about 50%."

CONCLUSIONS:

Yes, it's true: "There aren't as many Mountain Bluebirds around as there used to be" in the Calgary area. The years from 2007 to 2011 have had low numbers of Mountain Bluebirds in the Calgary area. The best years for Mountain Bluebirds were in the late 1980s and early 1990s with the very best years being 1988 and 1989.

Tree Swallows showed high numbers most years in the 1970s and early 1980s and most years from 2006 until 2011.

Weather is one known reason for good years for Mountain Bluebirds when an early spring gives them an early start and therefore a chance for second broods.

Weather is a known reason for poor years for both Mountain Bluebirds and Tree Swallows. If the rains come at the wrong time,

especially when the young are about 6 to 9 days old, the parents are unable to get enough food for them or brood them and young are often found dead. This is especially true for Tree Swallows.

There are no doubt other reasons for poor years which we do not understand, such as what is happening on their wintering grounds.

ACKNOWLEDGEMENTS:

I would like to acknowledge those who compiled the statistics for Calgary Area Bluebird Trails over the years including Jean Moore (1988-1997), Dietlinde Wall (1998-2004), and Bill Taylor (2005-2011); Andrew Stiles, who helped me with the graphs; those who helped me get started with Mountain Bluebird trails: Harold Pinel and Cam Finlay; Myrna Pearman, who offered advice over the years; and finally all those monitors who turned in their statistics over the years.

APPENDIX - ABOUT THE MOUNTAIN BLUEBIRD TRAILS:

Harold Pinel: In 1973, Harold Pinel set up 192 nestboxes at 1/2 mile (0.8 km) intervals from Turner

Valley to Sundre and then to east of Didsbury. By 1975, he had built this trail up to 400 nestboxes by extending it to Chain Lakes and further east of Didsbury, and adding a Water Valley and a Sundre loop. He wrote an article on this trail in *Blue Jay* each year from 1973 to 1978 and a summary article in the Sept. 1980 issue¹. He established where the good bluebird habitat in the Calgary area was found. From an article in the June 1974 *Blue Jay* regarding his first season in 1973:

"Turner Valley to Calgary and Bottrel to Elkton were the areas of highest bluebird density. The areas from Calgary to Bottrel and from Elkton to Didsbury had only one pair of bluebirds between them and this pair did not nest successfully. It is interesting that these unproductive areas are cultivated lands with very few trees, whereas the productive areas were characterized by scattered aspen groves."

Harold discontinued this project after 1978 and Calgary Area Bluebird Trail Monitors took over many of his nestboxes. Harold Pinel attempted to maintain his

¹Pinel, H.W. 1980. Reproductive Efficiency and Site Attachment of Tree Swallows and Mountain Bluebirds. *Blue Jay* 38:177-183.



trail with a consistent spacing (1/2 mile) and a consistent number of boxes (400 from 1975 to 1978). Where # of Boxes is less than this, it indicates boxes not available at the beginning of the season due to things like vandalism and road construction.

For all other trails mentioned below, spacing was variable as monitors attempted to set up nestboxes in habitat more suitable for Mountain Bluebirds.

Blake Stillings: Blake set up 100 nestboxes in 1978 as a retirement project. By 1980 he had 312 nestboxes in the area from Cochrane to Water Valley and was up to 398 nestboxes by 1990. This trail was in favourable Mountain Bluebird habitat so results are better than most other areas. With this large number of boxes he wasn't able to get out on his trail regularly so in some years some numbers are estimated. However, these were estimated based on nearby trails each year, so they should have some validity. Blake Stillings died on Mar. 12, 1991.

George Loades: George Loades' father, Curly Loades, started with a small trail in 1985 in the Jumping Pound area. George took over this trail in 1986 and added some

boxes in the Priddis area, about 30 km to the southeast. By 1990 he had over 300 nestboxes in the two trails and maintained these since; he gradually built up his trails to over 400 boxes in recent years. In occasional years, numbers will have been estimated – in particular, 1992 when his work commitments didn't allow complete monitoring. George Loades died on Sept. 22, 2009.

Ray Woods: Ray Woods, along with his wife, Agnes, took over the Elkton section of Harold Pinel's trail in 1979. They have been faithful monitors ever since except for a hiatus from 1994 to 1998 when they were in Europe, as Ray was on assignment with Shell Oil.

Don Stiles: Don Stiles helped his son Andrew, aged 11, set up 50 nest boxes east of Didsbury in 1977. This was built up to 100 boxes by 1980 and maintained at this level ever since, although in the first few years, changes were made by removing boxes prone to house sparrows, and adding

STAN PALMER 1924 TO 2011

We noted regretfully the passing of a long time monitor, Stan Palmer. His route in DeWinton expanded to over 100 boxes until 1999 when he and his wife retired. Mike Risely now has this route. There are countless anecdotes about Stan and his avian adventures, including encounters with bees, Starlings, and Red-tailed Hawks. One of his Tree Swallows was recovered in Nebraska the same year banded.

From: "Calgary Area Nest-box Monitors Annual Report 2011"

more where Mountain Bluebirds were expected. In 1986 a section was begun east of Olds with 30 nest boxes in more favourable Mountain Bluebird habitat. In 2004 these boxes were given to Ron Reist of Olds to cut back the trail somewhat to shorten the hours of monitoring needed. This means that the years 1986 to 2003 have more boxes favourable to Mountain Bluebirds than the other years.

All Monitors: These include statistics from all monitors since 1979 when Calgary Area Bluebird Trail Monitors took over Harold Pinel's trail. These statistics also include those of Blake Stillings, George Loades, Ray Woods, and Don Stiles. A sample of the number of monitors involved: 1980 – 7; 1987 – 24; 1994 – 42; 2003 – 46; 2009 – 49.

BANDING A FEMALE

MOUNTAIN BLUEBIRD. JACK BORNO



MORE INFORMATION

The *Calgary Area Nest-box Monitors Annual Report 2011* is a very interesting document from many perspectives and worth reading. If you would like a copy of the pdf, email your request to:

- Bill Taylor:
durham825@shaw.ca; or
- Nature Alberta:
na@naturealberta.ca

The Annual Report 2011 should also be on the Nature Alberta website: www.naturealberta.ca – if not right away, then when the website overhaul is completed.

Some Alberta bluebird trail websites of interest are:

- Calgary Area Nestbox Monitors (CANM): <http://canm.canadiannaturenetwork.ca>
(This includes their Annual Reports from 2009 and 2010.)

- Mountain Bluebird Trails Conservation Society (Lethbridge):
www.bluebirdtrails.org
(This includes the CANM Annual Report for 2011 under statistics.)

- Ellis Bird Farm:
www.ellisbirdfarm.ca
(This includes the CANM Annual Report for 2011 under statistics.)



FEMALES ARE OBVIOUSLY LESS BLUE, BUT STILL BLUE ENOUGH TO ALWAYS BE IDENTIFIED AS A BLUEBIRD. JACK BORNO

Hazards of Monitoring!

Monitors can encounter all sorts of hazards and interesting situations. Reports came in about cows following or impeding our vehicles, heavy rains which make access to boxes almost impossible, deep late April snowfalls which hide boxes, and other residents – like squirrels – who object to our intrusions. All in a day's work!





THE MALE MOUNTAIN BLUEBIRD GETS AGGRESSIVE... LEN PETTITT

Dive-bombing Bluebird

BY LEN PETTITT

Yesterday [May 3rd] I ventured north of our city about 30 km to a site of a known Mountain Bluebird box that was inhabited last year. My intentions were to take a few photos if the residents were in the area.

A male Mountain Bluebird sat on a wire high above the bluebird house. When I got within several feet of the residence, he began to dive-bomb me – swooping at my head and then hovering a short distance above. This gave me the chance of an in-flight shot!

I then noticed the female Mountain Bluebird sitting a short distance away on the above wire holding a plump worm in her beak. This indicated that young birds were in the box; thus I took a few more shots and moved on away without further disturbance.

WHILE THE FEMALE WAITS TO DELIVER A MEAL. LEN PETTITT



Muddied Waters:

Tracking the range expansion of a widespread crayfish

BY JESSE K. HITCHCOCK AND BRONWYN W. WILLIAMS

North American crayfishes are a diverse group of freshwater crustaceans, representing more than 400 species and subspecies, or over 75% of the global crayfish diversity (Taylor et al. 2007).

Crayfishes play an important role in aquatic communities as a food resource for many aquatic, terrestrial, or avian taxa (e.g., Roell and Orth 1993), and as processors of plant and animal material (e.g., Rabeni 1992, Usio and Townsend 2004) which in turn increases nutrient availability for other organisms. Many crayfish species exhibit restricted ranges, which in turn increases the risk of endangerment and extinction (Larson and Olden 2010).

Indeed, almost 50% of North American crayfish species are considered threatened as a result of habitat loss, water quality, and introduction of non-native species (Lodge et al. 2000; Taylor et al. 2007). In contrast, frequent use of crayfishes in aquaculture, pond management, biological supply, the aquarium trade, and as bait has resulted in the introduction and range expansion of several species with substantial negative effects on native biodiversity and community structure (Lodge et al. 2000; Larson and Olden 2008).

The widespread Virile Crayfish (*Orconectes virilis*) is the northernmost ranging crayfish species in North America. Its distribution spans large portions of the Interior Plains and Laurentian Uplands (Crocker & Barr 1968, Hamr 2002, Williams et al. 2011),

much of which were covered by the Laurentide ice sheet during the last glacial maximum approximately 21,000 years ago. As a result, populations across much of the range are relatively young (< 15,000 years) and have expanded fairly rapidly. This expansion has occurred in multiple rivers of the central Interior Plains of U.S. and Canada, achieving up to 250 km of river distance in less than 20 years (Williams et al. 2011).

Crayfish catches and sightings within the period of expansion suggest different patterns of spread across drainages (Williams et al. 2011). The Virile Crayfish was first observed in eastern localities along rivers of the northern prairies region (e.g., North Saskatchewan and

Battle Rivers of northern Alberta and Saskatchewan); subsequent sightings to the west suggested upstream expansion. In contrast, first reports of the Virile Crayfish in the southern prairies (e.g., South Saskatchewan and Missouri Rivers in southern Alberta and Saskatchewan and Montana) were from western localities, primarily lakes and reservoirs that were popular fishing destinations. Subsequent observations came from eastern locales suggesting downstream movement.

The above observations suggest that expansion of the Virile Crayfish beyond the limits of its former range is likely in part due to human-mediated introduction. However, changing environmental factors, both abiotic and biotic, have allowed several aquatic organisms to expand their range





without direct human assistance (e.g., climate change, changes in water chemistry).

To identify the mechanism behind this rapid range expansion across the Interior Plains, and identify sources of introduction, we are examining the genetic structure of the Virile Crayfish using high-resolution genetic markers. This will provide us with an understanding of the genetic diversity and differentiation between and among crayfish populations across the region. Using these data, we can construct a detailed map of potential colonization routes and assess whether the rapid expansion is consistent with expectations of recent environment-facilitated movement, of human-mediated introduction, or a combination of mechanisms. Smooth and gradual change in relatedness within continuous river drainages would indicate natural dispersal. Conversely, presence of multiple genetically distinct populations within a single river system would suggest human-mediated translocation.

We are also examining the associated variability in body form or morphology that occurs

throughout the range of the Virile Crayfish. Our aim is to determine whether this morphological variation is associated with the genetic differentiation across the range, which would suggest that the genetic consequences of the prairies range expansion are producing tangible changes in crayfish body form. We will also consider the adaptability of these morphological changes, which will allow us to understand whether the morphological changes are facilitating or encouraging further range expansion.

Based on both morphological and genetic data, our work has important implications when considering the potential for future spread of the Virile Crayfish across the Canadian Prairies and U.S. Great Plains. It will also allow us to understand what conditions may have initially facilitated the introduction and expansion of the species across Canada. Identification of invasion mode and the associated ecological changes is important for effective management of the species and freshwater ecosystems. Our work is also important for invasive species management in general. The resulting genetic models and knowledge of the associated

morphological adaptations will provide managers with tools to make important decisions regarding control and prevention of facilitation and spread of other potential invaders.

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The female in this photo really startled me when I collected her. I saw a big mass of mud moving across the bottom of the stream. She is covered in epibionts (living organisms that I couldn't identify) and detritus. She was, interestingly, also 'in-berry' (which you can't see), meaning that she laid her eggs and was carrying them on the underside of her abdomen." – BRONWYN WILLIAMS

Blooms of Spring:

The 2011 May 25th – 31st Species Count for Plants in Bloom

BY SUZANNE VISSER

Note: the full report, including species lists, comments and participants list, will be on the Nature Alberta website, but may not be available for a while (see “NA Website Overhaul” story, pg 13).

Spring weather in Alberta in 2011 was cold and wet. Based on information extracted from the Environment Canada National Climate Data and Information Archive (Climate Summaries), temperatures across the Province in March and April were well below the 30 year Canadian Climate Normals (1971-2000) (Environment Canada 2011) by approximately 3 to 6°C in March and 1.7 to 3.1°C in April.

Associated with the low temperatures was above normal precipitation which ranged from 85% to 119% above normal in March and 53% (Edmonton) to 236% (Calgary) in April. Although temperatures in May in the Edmonton and Red Deer areas rose to slightly above normal, they remained 0.3 to 1.3°C below normal in southern Alberta (Lethbridge, Taber, Calgary, Kananaskis). Higher than normal precipitation continued into May, especially in the Calgary and Kananaskis areas where total precipitation was 145% and 195% of normal, respectively. Most of the

precipitation in the Kananaskis area fell as snow.

The cold, wet weather resulted in a very late spring in many locations in Alberta, and this was evident from comments submitted by several of the participants. In southern Alberta, most observers remarked on the delay in flowering, which was estimated to be up to 3-4 weeks in the Brooks/Taber and Calgary areas (Lloyd Bennett, Ann Brebner). Heavy winter snowpack which lingered until late into the spring was considered a factor in postponing the onset of flowering in the Waterton and Calgary areas (Peter Achuff, Wayne Brideaux), although Ann Brebner suggested that the heavy snowpack could have enhanced conditions for overwintering weeds allowing them to be more prolific once the snow melted.

Observers (Eileen Ford, Gail Hughes) in the Red Deer area lamented about the absence of species that they usually find blooming during the May Count

(e.g. Solomon's-seal; Lily-of-the-valley; Red-osier Dogwood; Bunchberry; members of the pea family; geraniums; Canada Anemone; bedstraws; roses; not even the Caragana was flowering). Jasper, Edmonton and Ft. McMurray participants did not comment on the late arrival of spring to the same extent as the southern Alberta observers, suggesting that spring-flowering plants in central and northern Alberta may not have been as affected by the cold, wet spring weather as in more southerly locations.

As discussed above, May temperatures in Edmonton were slightly above normal, and this may have accelerated flowering by plants that were delayed by below normal temperatures in March and April. Despite the cold, late spring, 103 participants reported a total of 357 species from 18 Count locations, which was very similar to the total of 355 species reported in 2008 - another cold, late spring. Of the total number



of species, 55 (15%) were exotic, which again is similar to the number reported in 2008. At 122 species, Edmonton participants reported the highest number of species in bloom, followed by Calgary with 119 species, Taber with 107 species and Waterton with 93 species.

Exotic species in these locations constituted 17%, 19%, 27% and 11% of the total, respectively. The most frequently observed exotic species was the Common Dandelion (*Taraxacum officinale*), which occurred in all of the Count areas, followed by Stinkweed (*Thlaspi arvense*), Caragana (*Caragana arborescens*), and Black Medick (*Medicago lupulina*), which occurred at frequencies of 50%, 44% and 44%, respectively. Of concern is the increasing prevalence of the noxious weed, Leafy Spurge (*Euphorbia esula*), especially in southern Alberta where it was reported in bloom in Medicine Hat, Lethbridge, Taber and Calgary. Similarly, Derek Johnson expressed concern about Creeping Foxtail (*Alopecurus arundinaceus*) (see article below), which is becoming increasingly common in the Edmonton and Hoople Lake areas. According to Derek, this species is often misidentified as Timothy (*Phleum pratense*), and may be under-reported as a consequence of confusion between the two species.

As has been observed in previous Counts, the majority of species (41%) occurred in only one location, while only 5.6% of the species occurred in 9 or more of the 18 locations surveyed. The

species that were most commonly reported included Star-flowered Solomon's-seal (*Smilacina stellata*) (72%), Northern Gooseberry (*Ribes oxycanthoides*) (78%), Saskatoon (*Amelanchier alnifolia*) (78%), and Wild Strawberry (*Fragaria virginiana*) (83%). Early Blue Violet (*Viola adunca*) was the most frequently observed native species, being reported from across Alberta in all but one location (94%).

Reported also were seven rare plant species, ranked as either S1 or S2 by the Alberta Conservation Information Management System (ACIMS) (May 2011). These included: Western Wakerobin (*Trillium ovatum*) in Waterton, Early Buttercup (*Ranunculus glaberrimus*) in Waterton and Canmore, Leafy Braya (*Braya humilis*) in Jasper, Small-flowered Rockstar (*Lithophragma parviflorum*) in Waterton, Macoun's Cinquefoil (*Potentilla macounii*) in Calgary, Crowfoot Violet (*Viola pedatifida*) in the Red Deer area, and Large-flowered Lungwort (*Mertensia longiflora*) in Waterton. Few-seed Bittercress (*Cardamine oligosperma*), a species reported from Jasper, is new to the list, not having been reported in bloom on the May Count previously.

That spring was late was evident from some early spring-flowering species that were still blooming at the end of May. For example, Hooker's Townsendia (*Townsendia hookeri*), one of the first species to flower in the spring in southern Alberta, was reported still in bloom in 28% of locations surveyed. Also, some of the very



early-flowering tree species (*Populus balsamifera*, *P. tremuloides*, *Ulmus americana*), were found blooming in one or two of the locations surveyed. In a warm, early spring these species have usually finished flowering. In Calgary, Crocus (*Anemone patens*), Moss Phlox (*Phlox hoodii*) and Canada Buffaloberry (*Shepherdia canadensis*) were still blooming in over 50% of the locations examined - a pattern very similar to that described for the 2008 Count.

In summary, spring in Alberta in 2011 was comparable to that experienced in 2008, i.e. cool, snowy and wet; this undoubtedly resulted in lower numbers of species in bloom in many of the count areas than observed in previous years. In addition, the cool weather potentially delayed and/or extended flowering of some early spring-flowering species such as Aspen Poplar, Hooker's Townsendia, Canada Buffaloberry, Crocus and Moss Phlox, and possibly of some late spring-flowering species as well.

ACKNOWLEDGEMENTS:

This Count would not have been possible without the input from many participants across the Province. Your contributions are very much appreciated. I am very grateful to Derek Johnson for his insightful

comments and for reviewing the report.

References:

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Government of Alberta. Tourist, Parks and Recreation. Alberta Conservation Information Management System. List of all Species and Ecological Communities Within the ACIMS Database - May, 2011. <http://tpr.alberta.ca/parks/heritageinfocentre/datarequests/default.aspx>

Creeping Foxtail

BY DEREK JOHNSON

The more I see Creeping Foxtail (*Alopecurus arundinaceus*), the more I want to know about it. Where did it come from, how did it get here, and why is this exotic species now so common (I think I can answer the latter).

The first time I saw it in Alberta was in 1987 under the bridge on Whitemud Drive at Rainbow Valley in Edmonton, during the 1987 May Species Count (a very early spring). It showed up in abundance along Highway 16 around the Wagner Natural Area (WNA) in the early 1990's after completion of the Villeneuve interchange, which prompted the Wagner Natural Area Society to contact Alberta Transportation and Utilities to ask if the species was included in revegetation seed mixes for highway projects. AB T and U's response was that the species isn't, nor has it ever been included in seed mixes used in highway revegetation projects.

The grass still survives in a couple of places along the access road to the WNA. Since then I have seen the species on occasion along roadsides as far east as Lloydminster, between Edson and Hinton in the west, Fort McMurray

in the northeast, Manning in the northwest, and Lacombe in the south. I don't get down Highway 2 much anymore so I suspect it goes farther south than Lacombe.

Much to my surprise, it started showing up in some of the clearcuts on the EMEND [Ecosystem Management Emulating Natural Disturbance] project NW of Peace River in 2004. I suspect it got there on some logging equipment. Creeping Foxtail is sometimes planted as a forage grass for livestock. It was introduced to the western shoreline of Beaverhill Lake by the Alberta Public Lands Division in the 1980's to "improve" the pastureland (Ksenija Vujnovic, pers. com.). This may well be "ground zero" for the start of its invasion in Alberta. I think part of the problem as to why this species isn't being noticed more is that almost everybody confuses it with Timothy (*Phleum pratense*). It does look very similar from a distance. However, for a grass, Creeping Foxtail is a very early flowerer, coming into flower in late May/early June, usually at least 3 weeks before Timothy starts to flower.



WESTERN WAKEROBIN. WIKIPEDIA COMMONS

It may not be as persistent a grass as Timothy, but with all the mowing and disturbance going on along the thousands of kilometers of roadside in AB, suitable habitat for this species is definitely not at a premium, hence my conclusion as to why it has become so common and widespread. When Ian and I went out to Hoople Lake, the roadsides of Highway 16 near the open pit coal mine at Lake Wabamun were covered with it and it was in flower there. It has shown up on and off along the roadside at Hoople Lake since 1994.

CREEPING FOXTAIL. MATT LAVIN/WIKIPEDIA



First Hand: Some Great Wildlife Encounters

First Hand from Medicine Hat

Phil Horch writes an "Exciting Sightings" column in the Grasslands Naturalists' newsletter, the Sagebrush Chronicle. Recently, he wrote about several rather exciting "First Hand" encounters . . . and one non-encounter.

COUGAR AND MOOSE!

This summer saw the appearance of a Cougar in Police Point Park in Medicine Hat, which led to an exciting encounter with two female hikers. Following that, a young bull Moose showed up in the same park and was seen by many people over a period of many weeks. Police Point is a haven for an assortment of animals including coyotes, foxes, deer, porcupines, skunks, weasels, beavers, rabbits, and in winter, occasionally pronghorn. Not bad for a city park!

BLACK-HEADED GULL AND FIELD SPARROW

Two of the rarest sightings in southeastern Alberta this

summer were a Black-headed Gull and a Field Sparrow!

The Black-headed Gull was first seen by Jukka Jantonen of B.C. on July 18 along the northwest arm of Pakowki Lake. Ben Velner, Bob Frew and Mike Mulligan confirmed the sighting on July 21. Several others from Calgary were then successful in seeing this first ever species for Alberta.

A hatch-year Field Sparrow was captured and banded at the Elkwater migration monitoring station on Aug 30, as reported by Yousif Attia. It is believed that this is only the second record for Alberta. In June of 2000, Milt Spitzer reports that he and other birders had a singing Field Sparrow on territory

along the Sibbald Flats Road which was very cooperative and showed itself to anyone who made the effort to find it.

Ben Velner was also fortunate to see a single **Indigo Bunting** in Strathcona Island Park in Medicine Hat on a couple of occasions in early summer. The Medicine Hat area is probably one of the only places in Alberta where one has a chance each year of finding this species.

BLACK-HEADED GULL. HANS HILLEWAERT/WIKI COMMONS



FIELD SPARROW. U.S.
NATIONAL PARK SERVICE/
WIKI COMMONS

NOT-SO-GREAT WILDLIFE NON-SIGHTINGS!

It was disconcerting to say the least that **Western Kingbirds** apparently did NOT nest in Police Point Park this summer, judging by the lack of singing on territory. This species has

been a regular and fairly common breeder in the park for countless years. As well, there was only one record of a singing **Baltimore Oriole** in the park this summer; most years there would be at least three and usually more pairs.

It is possible that the lack of these two species in the park is an indication of the significant decline of songbirds which are specific to grasslands habitat and which migrate to the tropics.

First Hand from Miquelon Lake

This "First Hand" was posted by Troy Colwell, July 3rd, on Nature Alberta's Facebook Wall. Check out Nature Alberta's Facebook page. Maybe post your own thoughts!

"My wife and I were walking the trail system at Miquelon Lake and happened upon an abandoned homestead. Turns out it wasn't quite empty as two long-bodied brown mammals scurried out of the trees next to the main crumbling building. Best I can figure they were Fishers. They disappeared too fast to get a picture, but a great encounter none-the-less."

First Hand: What is it??

Len Pettitt would really like to know what species this caterpillar is. Can you help him out? The photo was taken in late August. Send your answers to wildhavn@memlane.com.



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.

ACA Wins!

The Alberta Conservation Association (ACA) has been awarded a \$100,000 grant through the Shell FuellingChange contest for ACA's wolverine project. The grant, said Elize Smit, ACA's Communications Coordinator, "is an integral part of the wolverine project's budget, so the wolverine team will now be able to do the entire project as it was initially proposed."

Nature Alberta congratulates ACA on this vital grant for a vital species. Through a public voting process, Shell granted #1 million in this round; there will be a second \$1 million giveaway later in the year. For more information, visit www.fuellingchange.com.





Citizen Science in Alberta

BY SARAH VANDERWOLF

Watching birds and counting butterflies may sound like hobbies to some, but for participants in what is known as “citizen science”, these activities are also part of an important and ongoing effort to monitor the abundant wildlife living throughout Alberta’s diverse natural habitat.

A growing number of Albertans are participating in citizen science projects such as the annual Christmas Bird Count and the Canadian Lakes Loon Survey, in which amateur scientists help assess the status of population, distribution, breeding, and migration patterns of birds, butterflies, and other animals from year to year.

“Citizen science” is a recently coined term that describes an old idea: involving members of the public in scientific endeavours requiring large amounts of data. Public participation is particularly important in the field of natural science, in which ongoing monitoring of songbirds, loons, hawks, owls, butterflies, and other plant and animal species helps create a more complete portrait of changes in Alberta’s natural world in response to environmental changes such as forestry, oil and gas development, climate change, and singular events such as flooding or spring snowstorms.

Citizen science is particularly valuable in two ways, says Dr. Geoff Holroyd, a lifelong birder and recently retired Environment Canada research scientist, as well as a recently-appointed Nature Alberta Director. Involving the public in tracking wildlife populations allows for more comprehensive data gathering and increased public awareness of conservation. Dr. Holroyd also

believes there is significant public interest in wildlife and natural science, and that citizen science allows members of the public to become directly involved in preservation of the natural world. This bodes well for the future of our province’s natural habitats, as initiatives that are driven solely by government bodies or NGOs (non-governmental organizations) will not have the same positive impact as those that have the benefit of broad public support and engagement. And besides, says Dr. Holroyd, participation is fun and rewarding to see his observations used to protect our natural resources.

A key ingredient to a successful citizen science project is ensuring that contributions are utilized and valued, says Ted Hindmarch, President of Nature Alberta. Like Holroyd, Hindmarch has had an interest in birding for most of his life, but acknowledges that “birding with a purpose” provides more fulfillment than doing it simply as a hobby.

Hindmarch, a self-described “Grade 12 graduate, learn-by-the-seat-of-your-pants amateur naturalist” who is also a Captain in the Canadian Forces (he retired in November 2012), says he finds the opportunities to be physically active and get outdoors, away from the hustle and bustle

of modern urban life, to be the most appealing aspects of citizen science. Hindmarch has travelled throughout western Canada, from Dawson Creek to Drumheller, in pursuit of rare bird sightings. He estimates he has seen over 300 bird species in Alberta within the last ten years as part of a personal hobby that he says his wife calls an “obsession.”

Data collected from citizen science projects can reveal patterns in bird behaviour, such as this spring, when Holroyd learned that Ruby-throated Hummingbirds had arrived in Winnipeg but were still a week or two away from making their migratory return to Alberta, according to the e-Bird database (which is an extensive data source maintained by the Ornithology Lab at Cornell University). E-Bird recently achieved an important milestone by reaching 100 million total records of bird sightings, says Holroyd.

Citizen science observations have also shown that Whooping Cranes have been sighted in the summer in central Alberta, and that loons are seriously affected by heavy rains which disrupt their nesting season by flooding their nests, as happened in May 2012 in the foothills. An unexpected spring blizzard can have a noticeable impact on bird populations, as Hindmarch observed during a bird count in Waterton Lakes National Park in May 2002; many insectivorous birds had not survived due to the impact of the snowfall on insect populations, the birds’ food.

Locally collected data from citizen scientists can be entered into large-scale databases to identify trends throughout Alberta and North America. The Atlas of Breeding Birds of Alberta, for example, was a five-year project that relied upon the efforts of volunteers throughout the province to determine the presence of birds within defined areas of 100 km². Active participation in this ambitious project permitted almost complete coverage of the entire province, says Hindmarch, and the result is a comprehensive data source providing information about habitat preference, distribution, and population status of birds throughout Alberta. (The Atlas of Breeding Birds of Alberta (1992), as well as The Atlas of Breeding Birds of Alberta: A Second Look (2007) are both available from the Nature Alberta bookstore.)

Other large data sources derived from citizen scientists are the relatively new e-Bird database maintained by Cornell University and the National Audubon Society's annual Christmas Bird Count, which dates back over a century. Both of these initiatives include data collected from across North America and allow birders to become engaged in a larger community of citizen scientists. Scientists then use the collected data to identify trends in the overall health of our environment, including water, air, natural resources, climate and more. These and a variety of other programs are coordinated in Canada by Bird Studies Canada.

The harmful impacts of DDT on bird populations were first identified from data collected through the Christmas Bird Count,

says retired forestry professor Dr. Jim Beck, which provides a notable example of the importance of citizen scientists' work. Many bird species that were formerly endangered have made remarkable recoveries in the last few decades due to conservation efforts such as banning DDT in Canada in 1970. Peregrine Falcons, for instance, were removed from the endangered species list in 1999 in both Canada and the U.S.

Dr. Beck and his wife Barbara have travelled extensively in Canada, particularly in the northern territories, to track birds and butterfly populations. They are also strong promoters of the Alberta Butterfly Counts, in which data is collected on the distribution, range, and timing of flight of butterflies in the province.

"We're not biologists, we just like doing things for science," says Dr. Beck. Citizen science offers an opportunity to get away from the rat race, he explains, and he finds northern Canada a particularly intriguing destination since many animal species in these remote areas are largely undocumented. Dr. Beck says he and his wife have travelled to every community in the Northwest Territories and Yukon that is accessible by road during their years as avid bird and butterfly watchers.

The very nature of citizen science – self-reported and carried out by non-professionals – means that the data is not infallible, says Dr. Beck. While this does not negate its value and importance, he stresses, users of data collected from citizen scientists should be very careful about how much reliability they put into outliers.



Dr. Beck also cautions against the use of recorded birdcalls while in hot pursuit of bird sightings during mating season, since the sound of other birds elicits defensive behaviour and disrupts the birds' normal mating behaviour, such as protecting their nests and feeding their young. Using electronic animal calls is illegal for hunters, says Dr. Beck, and bird watchers should be equally cautious in the tactics they use while birding.

While birding is the predominant activity among citizen scientists due to its long history as a popular pastime, citizen science is by no means limited to birds. Participants interested in tracking other animal or plant species or monitoring environmental changes such as weather patterns have every opportunity to get involved in citizen science projects that promote scientific literacy and conservation awareness amongst families and communities.

For more information about volunteering opportunities with Nature Alberta, contact Executive Director Petra Rowell petrar@naturealberta.ca; for other opportunities or information, please visit:

<http://birds.audubon.org/christmas-bird-count>

<http://www.birdscanada.org/volunteer/index.jsp?lang=EN>

<http://www.ebird.org>

<http://www.birds.cornell.edu>

<http://www.pwrc.usgs.gov/bbs>

Long-eared Owls in Peace Region

BY MIKE BLOM

Being a prairie boy from Saskatoon, Saskatchewan, I've always been interested in owls, especially Snowy Owls (Nyctea scandiaca) and Long-eared Owls (Asio otus).

I moved to Peace River in April of 2011 to a new job and a completely new landscape to explore. Peace River is mostly comprised of rolling hills and open farm fields right smack in the middle of the boreal forest. It looks like south-central Saskatchewan to some but it has much more going for it being so far north.

I started banding birds of prey in 2003, helping a friend climb up into Great Horned Owl (*Bubo virginianus*) nests. Since I climbed to that first Great Horned Owl nest, I was hooked! I received my sub-permit under Dr. Stuart Houston in 2004 and banded various birds of prey under him until 2009 when I graduated to getting my own Masters permit. During those years I gained most of my experience banding various birds of prey with Brent Terry and Marten Stoffel around the Saskatoon area. When I felt like heading south into the Snowy Owl country, I would call up Dan Zazelenchuck and we would go out trapping and banding Snowy Owls.

This spring I noticed a lot of Short-eared Owls (*Asio flammeus*) and Northern Harriers (*Circus cyaneus*) floating around Peace Country. Like my friends always told me, "if there are Short-eareds around or Harriers, there must

be a lot of voles and mice which in turn means there should be an influx of Long-eared Owls." That's the way it was back home on the prairies so why can't it be the same up here in northwest Alberta, right?

So to prove this theory, I set out to search the small stands of willows like I would back home. On April 29th, I checked a few fields south of Peace River close to the town of Jean Cote, AB. The first patch of willows produced a single Long-eared Owl nest! I was very excited to think – wow, these owls are this far north? After looking at the bird guides, Long-eared Owls are not supposed to be up here; from the range maps they are south of the Peace Region.

I checked another small willow bluff and lo and behold another Long-eared Owl sitting in a Black-billed Magpie nest! I started thinking to myself: "Is it going to be another one of those years where Long-eared Owls are virtually everywhere?" I had experienced a year like that in 2010 back home on the prairies; almost every willow bluff I checked there had at least one pair of owls nesting in it, if not more.



ONE OF THE ADULTS, WITH EAR TUFTS LAID FLAT, AT THE NEST SITE. MIKE BLOM



MIKE BLOM

On May 2nd – my birthday – I checked a couple more small bluffs by Dixonville and one of them had a Long-eared Owl sitting nicely 10 ft up on a crow's nest. May 6th, I looked by Marie Reine just south of Peace River and yet another two nests in willow patches less than 100m apart. I couldn't believe what I was seeing!

Unfortunately, with the amount of forest fires happening in Alberta this year, I didn't have time to check for more nests, so I ended up with 5 Long-eared Owl nests in a small amount of time, and once I got back from my first fire shift I was able to go back and check on the success of the nests.

On June 7th, of the five nests only two of them fledged young that were big enough to band. I banded a total of four young, which is a relatively small number; I've banded as many as six young at one nest site. At one nest, I banded three and the other nest only had one young with four addled eggs. The other three nest sites failed for some unknown reason.

Now that I know that Long-eared Owls do breed up here in NW Alberta and if time permits, I will be doing more thorough nest searches and plan to setup a spring

migration banding station to trap migrating Long-eared Owls. I am very much interested to see how much further north Long-eared Owls are going and hopefully I can change the range maps of these owls which were thought of only living in the southern Boreal transition.

You can check out my study on my blog at <http://raptorbanding.blogspot.ca/>



MIKE BLOM



THE CHICKS WAIT...LEN PETTITT

Wildlife! Starring... Black Tern

Black Terns (Chlidonias niger) nest in all of Alberta's natural regions, though the greatest occurrence is in the Parkland. However, it is relatively common – and always a treat – to see this graceful and lovely species in the drier habitat in the Grassland region and in the Foothills region.

Shallow lakes, marshes, sloughs, ponds, wet meadows: this is where you'll find Black Terns, often hovering over the water waiting to pick up floating insects and small fish, or catching flying insects in mid-air. But they can often be found in and over farmers' fields as well – eating

grasshoppers, beetles and other insects.

Black Terns usually nest in small colonies, though they do nest singly as well. Because their nests are only a few centimeters above water levels – on rafts of vegetation, hummocks, mud patches, old grebes' nests, etc. –

wave action and rising water often result in egg loss. Still, as long as conditions are the same year in and year out, the birds will return to the same nest area. They protect their nest with fierce vigour and will noisily divebomb intruders.

Black Terns are declining and listed as "Sensitive"; marshes and other



AS A PARENT FLIES IN ...LEN PETTITT

habitat in Alberta continues to be drained, developed for residential or used and polluted by industry. Survival problems may be exasperated by contaminants on their migration routes and wintering grounds.

The species doesn't spend much time in Alberta; it arrives by mid-May but leaves by late August or early September, spending the rest of the time on the northern coast of South America. Birders, however, are always grateful for Black Terns' presence during those three-plus months.

Information taken from: *The Atlas of Breeding Birds of Alberta*. 1992.

AND PROVIDES A TASTY TIDBIT! LEN PETTITT



Up Close Naturally: Lichens

BY MARGOT HERVIEUX

Lichens are actually fungi that have become partners with algae. The fungi provide structural support and absorb water and nutrients. The algae provide food through photosynthesis.

Lichens are able to survive under an amazing range of conditions from mountain tops and deserts to shaded forests and open prairie. Under harsh conditions they grow less than a millimetre a year and can live for centuries. In warmer, wetter conditions lichens will put on over a centimetre of growth in a season.

There are three major groups of lichens with names that reflect the way they grow. Crustose lichens form the crusty growths we commonly find on tree bark and rocks. Different species can be found on different species of tree or on different rock types. One kind of orange lichen is usually found only on rocks around falcon nests where it benefits from the extra nutrients in the bird droppings.

Foliose lichens are leafy in appearance and can be found on the ground, on rocks or on the trunks of trees. They prefer wetter conditions than crustose lichens

and are often abundant in mature, mixed-wood forests.

Fruticose lichens are often ground dwelling and have more fanciful shapes. The red-tipped fairy trumpets and the delicate clumps of reindeer lichen belong to this group as does the hairy, old man's beard that cloaks trees in old forests.

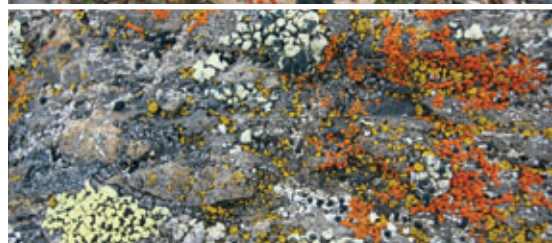
Lichen is the primary winter food of caribou, both the Woodland Caribou of the boreal forest and the Barren Ground Caribou of the arctic. Woodland Caribou spend the winter in areas of old growth forest dining on tree lichen and also using their broad hooves to move snow so they can reach ground lichens.

Lichens also play a role in human lives. Throughout history they have been important sources for fabric dyes, including royal purple, and have been used in beer and perfume making and for medicines. Because lichens get all their water and nutrients from the air, they are also very sensitive to pollution and are significant indicators of air quality.

The next time you explore your favourite natural place, keep an eye open for lichens. They can be found almost anywhere and the variety of colours and shapes makes them worth a second look.

Leaves aren't the only things that grow on trees. Those scaly, leafy or hairy looking growths on tree bark, as well as on rocks or on the ground, are lichens – organisms with a dual personality.

ALL PHOTOS COURTESY OF ALBERTAWOW.COM



AlbertaWow.com . . . WOW!

AlbertaWow.com is a wonderful website containing excellent photo galleries of Alberta lichens, fossils, mushrooms, rocks, wildflowers, berries and wildlife – plus lots of other information on Alberta campgrounds, hiking trails, and points of interest (with an interactive map). The site is an ongoing compilation maintained by Mark Townsend, a local Calgary resident. One could spend hours enjoyably going through all the photos and information. Check out AlbertaWow.com.



Margot also writes a column for the Peace Country Sun, archived copies of which are available at www.peacecountrysun.com.

CELESTIAL HAPPENINGS

Starry Nights

Fall/Winter (November to January)

BY JOHN MCFAUL

FEATURED CONSTELLATION: TRIANGULUM

Triangulum is one of the smallest and more obscure of the classical constellations catalogued by Claudius Ptolemy during the 2nd century AD. It is to be found below the beautiful Andromeda as she waits to be rescued by the hero Perseus. As the name suggests, this constellation consists of three medium bright stars in the shape of a scalene triangle.

The Greek astronomer Aratos associated this constellation with the island of Sicily whose three promontories resembled the pattern of stars that form this constellation. In Sicily there were many temples built to honour Ceres, the Goddess of Agriculture. For this Ceres petitioned Jupiter to place a likeness of Sicily into the celestial heaven.

The most notable celestial object to be seen in Triangulum is M33, known as the Triangulum or sometimes the Pinwheel galaxy. It is the 33rd object in the Charles Messier catalogue of objects that resembled comets. This catalogue was published in 1771.

M33 is the third largest of the Local Group of galaxies that

includes our Milky Way Galaxy and the Andromeda Galaxy. It is estimated to contain about 40 billion stars. It is thought to be between 2.5 and 3 Million Light Years away. It is faintly visible to

the naked eye in very dark skies well away from urban lights. Use a pair of binoculars to best view it. Theorists predict that this galaxy may take part in the collision of the Andromeda and Milky Way galaxies in about 4 billion years.



CELESTIAL HAPPENINGS

- Sun:** Rise – Nov. 1 (08:34 MDT), Dec. 1 (08:28 MST), Jan. 1 (08:50 MST)
Set – Nov. 1 (18:00 MDT), Dec. 1 (16:18 MST), Jan. 1 (16:26 MST)
Times are for Edmonton (Daylight Saving Time ends Nov. 3rd). There will be a total eclipse of the Sun visible from NE Australia on Nov. 13th.
- Moon:** Full – Nov. 28th, Dec. 28th, Jan. 26th
New – Nov. 13th, Dec. 13th, Jan. 11th
Note: There will be a Penumbral Lunar Eclipse on the morning of Nov. 28th just before Moon set. Watch around 7:33 AM for a dimming of the moon.
- Planets:** **Mercury** will be very low in the western sky after sunset in mid-November. It will be best seen in the SE morning sky around December 1st just before sunrise.
Venus continues to shine brightly in the morning sky. On November 11th the crescent Moon will be nearby. The planet Saturn will be very near Venus on Nov. 26th and 27th. By mid-January, Venus will be too close to the Sun to be seen.
Mars lies too close to the Sun to be seen during this time period.
Jupiter rises in the late evening during November. From mid-December through January it can be seen high above the southern horizon in the constellation Taurus the Bull. The Moon passes close to Jupiter on November 28th, December 25th and January 21st.
Saturn is a morning object in the eastern sky rising higher each day until it is due south on the morning of Jan. 17th. Watch for the Moon close to Saturn on Dec. 10th and Jan. 6th.
- 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.

Proposal to Name Island for Tom Maccagno

Alberta Parks is proposing to name an island within Sir Winston Churchill Provincial Park after the late Tom Maccagno, a Lac La Biche resident. Mr. Maccagno was a life-long supporter in preserving the natural beauty of the Lac La Biche area [and was also an active and passionate Director of Nature Alberta, representing the Corporate Club, Lac La Biche Birding Society].

A number of local organizations and supporters have indicated their support and desire to

honour him by naming an island after him. Sir Winston Churchill Provincial Park is located within the lake of Lac La Biche in northeast Alberta, approximately eleven kilometers northeast of the town of Lac La Biche. It is the only park in the province that is composed solely of islands.

Since there are strong historical ties between the community and Lac La Biche, Alberta Parks believes that this should be a locally decided initiative as there

is considerable knowledge and attachment to the islands within the city.

Information on this proposal and instructions for providing written or online comments are available at: www.albertaparks.ca/consult. Comments on the proposal to name an island within Sir Winston Churchill Provincial Park will be collected until December 12th, 2012.

From ParkNews@gov.ab.ca;
October 19, 2012



DOWNY WOODPECKERS AT A SUET BELL. TAMMIE HACHE

JOIN PROJECT FEEDERWATCH!

The 2012-13 season of Project FeederWatch has started!

Please join our team of thousands of volunteers across North America.

FeederWatchers choose how much time they want to spend counting birds, and their observations help scientists monitor changes in wintering bird populations.

New participants receive a kit with a handbook, a bird-identification poster, a calendar, and an instruction booklet. Results are published in Bird Studies Canada's *BirdWatch Canada* magazine, and in *Winter Bird Highlights* – the FeederWatch magazine. You can also explore online maps and charts to see what others are reporting.

Anyone with an interest in birds and nature is invited to learn more about the project and become a "Citizen Scientist." The new FeederWatch season began on November 10, but participants can sign up at any time. For more information about Project FeederWatch in Canada or to register, email pfw@birdscanada.org or call 1-888-448-2473.

A \$35 fee defrays the cost of materials and data analysis; participation is free for Bird Studies Canada members. Project FeederWatch is a joint program of Bird Studies Canada and the Cornell Lab of Ornithology.

From BSC Latest News Oct 5, 2012



INDIA

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Join naturalist Kelly Sekhon on his 9th India nature tour to visit some of India's best birding hot spots, renowned National Parks and famous historic sites. The variety of bird & animal life and the cultural highlights that you see will truly be amazing.

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PEAK ADVENTURES



CLUB PAGE



“We are the Champignons, we are the Champignons!”

BY MELANIE FJOSER

*Yes, we are the **Alberta Mycological Society**, the mushroom folks! We are fascinated by all things related to fungi.*

We began way back in 1987 as the Edmonton Mushroom Club. As we began more and more activities, we became the Edmonton Mycological Society. As our membership began to grow across our province and beyond, we changed to the Alberta Mycological Society, with over 400 members at last count.

Don't you have to know something about mushrooms to pick them? Yes! So come along and learn with everyone else at your own pace and interest. We have a wide range of members whose knowledge lies from complete novice to expert, and everywhere in between. But just to bring you up to speed on the jargon, when we pick mushrooms it's called a "foray". Although many people start picking mushrooms only for the table, they soon realize that fungi are incredibly important for the environment and have value in medicinal, cultural, spiritual and ecological ways, and begin to look at fungi in a different light.

What sort of activities do our members engage in? Generally we start our calendar year in

March with our AGM, which has morphed into a jam-packed day of lectures, activities, lunch and a preview of the upcoming year. The AGM is followed by a Gourmet Mushroom Dinner – this event is open to members and guests only, and is a popular sellout.

From April to October, we hold monthly evening meetings at the Riverbend Library in Edmonton – but sometimes we choose to have an outdoor class instead. Our indoor meetings feature educational programs to further our knowledge; we encourage people to bring mushrooms they've found to get them identified, or just to show them off. We encore these talks across the province whenever the opportunity or invitation arises.

As for forays, we have a variety of day or weekend forays around Alberta throughout the season, which often involves camping or hotels for those who want to make it more than just a day trip.

During the year, we also hold a few very special events.

“City of Champignons” is a **Wild Mushroom Exposition**, a one-day event usually held at the Devonian Botanic Garden in August. Displays of hundreds of fungi picked fresh the day before; taste delicious samples at the **Wild Mushroom Café**; go on a mushroom walk with an expert; talk to experts; purchase mushroom books, posters, membership; find out which mushrooms are edible, poisonous, medicinal, etc.

The Great Alberta Mushroom Foray is our yearly fungal biodiversity survey

A DAY OUT AT FISH CREEK. A. CHAUDRY



“CITY OF CHAMPIGNONS”
MUSHROOM EXPOSITION. R. ROGERS



held at a different site in Alberta each year. A total immersion in fungi, this 3 day event, held in late August or Labour Day weekend, includes mushroom picking, lectures and even beginners courses. We bring in mycologists (mushroom experts) from all over North America and beyond to assist us with identification. We pick a sample of all the fungi we can find, get them identified, record them in our database, photograph them, and dehydrate some to be accessioned to a herbarium. Not to forget, we get the edible ones to the kitchen and our chefs turn them into tasty morsels for all to try. Evenings find us gathered to listen to lectures from our mycologists,

pouring over mushrooms books and specimens collected during the day and enjoying the camaraderie and odd libation.

Every year we also have a **Mushroom Photo Contest**. We encourage our members and friends to take lots of pictures of mushrooms which we use for education, promotion and to round out our database entries. Prizes have included dinner parties and registration to our "The Great Alberta Mushroom Foray," among others.



**EARLY SEASON SHAGGY
MANES.** S. CROSSAN



**NOTE NOTCHED GILLS ON THIS
STROPHARIA.** A. FLEMING

INTERESTED IN BECOMING A MYCOPHILE AND IMPRESSING YOUR FRIENDS?

Membership is only \$30/year (single), \$40 for family; \$15 student; \$50 for corporate. Check out our website at www.wildmushrooms.ws

The Alberta Mycological Society is Nature Alberta's newest Affiliate Club.

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AN AMERICAN WHITE PELICAN MOVES A LOT OF WATER WHEN IT JUMPS IN FROM SHORE! JIM STRUTHERS



LAKE BEAUMARIS; SEE STORY, PG 21. JIM STRUTHERS



A FLOCK OF DOUBLE-CRESTED CORMORANTS RESTS AT LAKE BEAUMARIS; SEE STORY, PG 21. JIM STRUTHERS

Nature *gallery*



FALL AT VERMILION LAKES; PHOTO TAKEN OCT 18, 2012. IF YOU WISH TO SEE MORE OF RICK'S PHOTOGRAPHY, GO TO HIS WEBSITE WWW.ADANACPHOTO.COM; THERE, YOU HAVE THE OPPORTUNITY TO PURCHASE PRINTS OF MANY WONDERFUL PHOTOS. RICK PRICE



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