

# 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



A PAIR OF WHITE-TAILED DEER; SEE THE STORY PAGE 20. DICK DEKKER

*feature article*

## Deer in Jasper National Park

**BOHEMIAN WAXWING.**

JIM BROHMAN



**A LEUCISTIC PILEATED WOODPECKER; SEE STORY IN "ON THE COVERS" PAGE 3. RENATA AND WALTER HERBOLD**



*Nature Alberta:  
Celebrating our natural heritage*

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**NATURE ALBERTA DEADLINES ARE:**

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FALL ISSUE.**AUGUST 31**  
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Nature Alberta is composed of natural history clubs from across the province. The aims of the Federation are:

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

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# Editor's Page

BY BROOK SKAGEN (ASSISTANT EDITOR)

## Have You Seen a Steller's Jay?

Snowshoeing has long been a favourite winter activity of mine, and as the snow began to pile with the coming of the New Year, I grew eager to strap on the "paddles" for a day of winter fun. I decided I would make quick use of my complimentary Parks Canada pass to trek through one of my favourite areas: Cameron Lake.

Situated in Waterton Lakes National Park, Cameron Lake is a spectacular area to explore, no matter the season. Though the summer waters shimmer brilliantly amongst the backdrop of the Rocky peaks, winter brings with it a sense of mystic tranquility to the valley with every snowfall. But it wasn't just for the stunning views of towering peaks and snow-dusted treetops that I set out for

Cameron Lake; I was in search of my favourite park dweller.

A year round resident in Alberta, the Steller's Jay (*Cyanocitta stelleri*), also known as the "Black-headed Jay", is found in the province almost exclusively in the Waterton area (particularly near Cameron Lake), though the bird has been known to venture to nearby communities in the surrounding prairies. Their unmistakable blue and charcoal plumage provides a stark contrast against the backdrop of vibrant June greenery or the white of January snow.

In Canada, its typical range extends from the eastern slopes of the Rocky Mountains through British Columbia and portions of the Yukon. The Steller's Jay is the only crested jay of the Rocky Mountain slopes, preferring higher-elevation habitats than the similar Blue Jay (*Cyanocitta cristata*). Blue Jay

populations have expanded westward in recent years, and the Steller's Jay has become increasingly common east of the Waterton area; the birds have been known to



**BOLD AND INQUISITIVE, THE STELLER'S JAY IS A COMMON SIGHT ALONG THE TRAILS OF CAMERON LAKE.** BROOK SKAGEN

hybridize where their ranges overlap. There are 16 differing subspecies of the Steller's Jay found throughout North and Central America, though only the Steller's Jay of the Rocky Mountains (*C. s. annectens*) has a distinguishable white "brow" line above the eye.

Well adapted for a winter in the mountains, Steller's Jays are generalist foragers, storing away excess nuts, berries, insects, eggs, nestlings, the occasional hiker's snack, and any thing else they manage to get a hold of for the winter months. Bold, intelligent and opportunistic, they won't shy away from stealing from a neighbour's cache if left unattended, or confronting the source of spilled trail mix and protein bar crumbs directly.

**THE SUN PEAKS OVER THE ROCKIES AT CAMERON LAKE, AB.** BROOK SKAGEN



EDITOR'S PAGE cont'd...

By the end of my excursion, I was fortunate enough to catch a glimpse of the blue-feathered treasure I had sought out, though I conveniently left my camera in the back seat of the car! The splash of azure amongst a canvas of white will have to remain a memory until the next time we meet.

Have YOU seen a Steller's Jay?

#### Sources:

- Cornell Lab of Ornithology. 2015. All About Birds: Steller's Jay (webpage). Retrieved from: [https://www.allaboutbirds.org/guide/Stellers\\_Jay/id](https://www.allaboutbirds.org/guide/Stellers_Jay/id)
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- Fisher C, Acorn J. 1998 Birds of Alberta. Lone Pine Publishing, Edmonton AB.

## OOPS! AGAIN!



Last edition, we erroneously credited the back cover. The photo of two camouflaged deer was by well-known photographer Rick Price. Our apologies, Rick!



## On the Covers:



### FRONT COVER

Dick Dekker is an artist as well as a scientist and writer with decades of experience in the ecological genre. His painting of a white-tailed buck and doe as they traverse a snow-covered landscape serves as an introduction to this edition's Feature Story that compares Mule Deer and White-tailed Deer populations in Jasper National Park. The story starts on page 20.



### INSIDE FRONT COVER

"I have been off this week with bronchitis but temptation to go outside over powered me this afternoon when a large flock of waxwings went about feeding across from my house! I quickly mounted

"betsy" onto my tripod and made like a disinterested walker as I slowly moved into position! With the sun at my back I went to town (65 photos within 5 to 10 minutes)! I quickly screened and edited the photos and this beauty came out on top!! Hope you enjoy-what a spectacle!"

A leucistic Pileated Woodpecker was photographed by Renata and Walter Herbold at a feeder in the Maple Ridge rural subdivision NE of Gibbons, AB in early January. You can identify it as a male by its malar ("whisker") stripe.



### INSIDE BACK COVER

It's hard to believe that you are in Edmonton, but that is exactly where Larch Sanctuary is. To put it simply, in the words of Pam Wight, EALT's Executive Director: "It's wonderful!" See the story on page 18.

The mighty Muskrat! "In the winter, muskrats form 'push-ups' in the pond ice over their feeding areas. Push-ups are domes of frozen vegetation covering a hole in the ice. The muskrat keeps these holes open throughout the winter by continually chewing away the ice and pulling up underwater vegetation to build the insulated dome." — AB Environment



### BACK COVER

Lu Carbyn, Nature Alberta's new President, got quite the surprise when he checked his bird feeder in the middle of Edmonton during the Christmas Bird Count. Yes, there was the ever-present Magpie there. But lo and behold, there were two Coyotes filling up with seeds, as well. Of course, Coyotes are omnivores, after all; it's just that you don't expect them at your feeder!

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## LETTER TO THE EDITOR

## Response to Open Letter

Nature Alberta published an open letter to Premier Rachel Notley which urges her to scrap the Little Smoky caribou range plan and replace it with one that involves habitat protection as the sole means to save the herd. Letters of this nature are counter-productive to caribou conservation for the reasons outlined below.

When it was recognized that woodland caribou were in trouble in Canada, the Federal government brought together the top caribou biologists and scientists in the country. They spent a year sifting through the available science and wisdom to understand the cause of the declining numbers. Some of the best information came from Alberta, including that collected on the Little Smoky herd. What emerged was a clear scientific consensus on the sequence of events that has led to our current predicament. There is widespread agreement that human activities, including aggressive forest harvesting and energy development, have been major contributors to the caribou declines in most of Alberta's herds. Scientists also agree that the habitat has been rendered unsuitable not because of loss of critical food such as lichen but because our activities have led to increased mortality rates caused by predators such as wolves, bears, and cougars. Historically, caribou faced losses

to predators but they were able to cope by living in large unproductive patches of forest or peatland where the chance of running into a predator was kept to a minimum. However, forest harvesting in and around caribou habitat has created younger forests which is good habitat for moose and deer. Their numbers have increased and this has translated into more predators, wolves in particular. Higher wolf numbers along with them having increased access to caribou range through the use of seismic lines and roads as travel routes, has led to more predator-caribou encounters. The current predation rate is simply too high for many caribou populations to sustain. Tom Bergerud, considered by many to be the world's authority on woodland caribou, proposed the simple rule of thumb that woodland caribou populations cannot survive when wolf densities on caribou range go over 6 per 1000 km<sup>2</sup>. They were over 20 per 1000 km<sup>2</sup> in the Little Smoky area when wolf control began over 10 years ago. This means that virtually all of the Little Smoky range is currently not suitable because there are no large tracts of forest relatively free from predators where caribou can hide.

All of the above clearly points to the need for any recovery program to deal with the high predation losses in the short-term

and habitat restoration in the long-term. The Provincial draft plan proposes continuation of the ongoing wolf control program and construction of a captive rearing facility as means to achieve this. The open letter suggests predator reduction strategies will not work and we can conserve the Little Smoky herd by establishing "priority management zones where functional habitat would be protected from further development" providing "increased supply of food and protective cover". This suggestion runs counter to widely-held scientific opinion outlined previously. It focuses on food supply, a factor considered to not be limiting at present and it does nothing to reduce the immediate danger of the population going extinct due to high predator losses.

The letter states that the ongoing predator control program has not led to population increase. This is only half the story. The Little Smoky herd was headed for extirpation but wolf control has stopped the trend so the population is stable or slightly increasing near 100 individuals while nearby herds with no wolf control have continued to drop. The captive rearing facility is designed to give the Little Smoky an added boost to achieve population growth. The facility will consist of a large area surrounded by a predator-

proof fence. Suggested size is 100 km<sup>2</sup> which is less than half the size of Elk Island Park which is also surrounded by a fence. Any wolves, bears, cougars, or coyotes that happen to be inside the fence after construction would be removed. Between 20-40% of the adult females in the herd along with 1-2 males will be captured and transplanted into the fence. They will be housed there year round and allowed to raise their calves free from predators. When calves reach 1-year of age they will be captured and placed back with the herd outside the fence. The increases in calf and adult survival afforded by year round protection from wolves and bears has the potential to increase the Little Smoky herd rapidly even in the absence of predator control outside the fence. The letter argues this will never work because it has been tried before and failed. A program of this nature has not been tried before in Alberta. The Provincial government did try a 1-year pilot maternity pen where a small number of pregnant females were held in a very small (a few ha) pen for 2-3 months before they and their calves were released. The first year results were not promising so the pen was dismantled. However, two community-based maternity pen programs in BC have been in operation for 3+ years with encouraging results. In fact, one of the programs has been combined with local predator control and the small population has doubled in just 3 years!!!!

The pen proposed in the Alberta plan is different. It is much larger



and females are protected from predation year round. The letter raises the concern that yearlings released back into the surrounding herd will be naïve and they will be snapped up by predators. We won't know this until we try but if this is the case, measures can be taken to "train" yearlings to avoid predators and every effort will be made to release yearlings back into groups of wild caribou where they will have the opportunity to learn. This type of captive rearing and release has been successful in other parts of the world including New Mexico where desert bighorns have been brought back from extinction. The letter is strongly opposed to the killing of predators for caribou conservation. The captive rearing pen could vastly reduce the number of predators that would have to be killed.

The letter suggests that their habitat protection plan will cost peanuts and would not compromise industrial activities in the area. This fails to consider the true cost of habitat protection which by definition, requires that forests not be harvested and

oil and gas not be extracted. The loss of the associated revenue is a cost to Albertans, one considered particularly high for those whose jobs will be affected.

Those people who agree with the view expressed in the draft letter face their own "inconvenient truth". The scientific evidence clearly establishes that woodland caribou conservation plans must deal with high predation losses. This is unwelcome news to those who oppose wolf control or who advocate that habitat protection is the only means to recover woodland caribou populations. The draft range plan for Little Smoky is not perfect but it is a major advance over previous attempts. If people really want to help with the conservation of the Little Smoky herd they should pressure the government to get the plan operational as soon as possible. Suggesting alternatives that disregard the best available science and fail to address the tough issues is simply not productive.

DR. STAN BOUTIN, ALBERTA  
BIODIVERSITY CONSERVATION CHAIR,  
UNIVERSITY OF ALBERTA

FROM A PRESIDENT'S PERSPECTIVE

# Sustaining the Vision Meeting New Challenges

BY LU CARBYN

*In 2020, Nature Alberta will be celebrating its 50th anniversary.*

I was part of FAN (Federation of Alberta Naturalists, now Nature Alberta) from the year it started. Looking back, I realize that, as 22nd President, I am standing on some very dedicated and hardworking shoulders. It was always impressive to see so many dedicated people volunteering their time to our society. Though committed, I always kept putting off becoming involved in running for executive positions. My strength to resist weakened with age, and today I am proud, and honoured, to take up the challenge. It will be a difficult task to fill the shoes of Ted Hindmarch, our outgoing President.

We are an umbrella organization that involves 10 corporate, and 40 affiliate clubs, totaling an overall count of about 3,600 Albertans. We need engaged clubs that help advance the appreciation of our natural world. My home club, The Edmonton Nature Club, is a good example of a strong and active organization. Good leadership, effectively involving tools brought on by modern technology, has made it happen. In 2016, the club

organized 46 field trips and their web site averages about 3,800 visits per month. Well done!

To some observers, we are a fraternity populated by “old people”, mostly retired and seemingly over the hill types! Our average age indeed is at the upper end of the scale. In fact, our total number of NA members (excluding club memberships) has been declining in recent years. That needs to change - we need to adjust with changing times. A friend of mine likened it to an airport with only outgoing flights - no roads into the facility for new passengers to arrive. I hope, in the near future, we can address this problem by establishing a **Youth Engagement Program**.

We need more university students to enter our ranks as members, and as active participants. We also need renewed leadership from University professors to instill a sense of responsibility amongst the up and coming “new generation” of professionals entering into the work force. They should lead the way in a manner that professors (mentors) did



in my day - Dr. William Fuller, Douglas Pimlott, Tim Myers, Stan Rowe, Stephen Herrero and Ian McTaggart-Cowan to name a few. Those most informed can be most effective in providing leadership.

Advocacy should be an important consideration for all Albertan's who care about protecting our heritage for future generations. Should anyone doubt the importance of advocacy I recommend you read Lorne Fitch's article in AWA's *Wildlands Advocate*, “Two Fish - One Fish - No Fish” (available on the web). Or for that matter, see the many articles written by Patsy Cotterill in Edmonton's Parkland Naturalist.

In the past, Nature Alberta had been much more involved in advocacy. We should revive some of those efforts. That should be in conjunction with “sister” organizations such as Alberta Wilderness Association, CPAWS and others. It is important to work together. We do have a strong presence with ACA (Alberta Conservation Association) and that gives us a voice in current wildlife

management activities for the province.

One apparent change of realities, within the current political climate, is that there seems to have been somewhat of a shift from concerns about “endangered species” to “climate change (carbon tax)”. What is happening to the Endangered Species Conservation Committee of late? The committee was put in place in 1997, after Alberta’s signing of the national Accord, for the protection of Species at Risk. This body has not convened for over a year. It should; consider some of the issues: about a third of the endangered species in Canada exist in the Mixed Grass Prairies. Mixed Grass Prairies only occupy about 5 % of Canada’s land mass, and yet it is massively impacted by modern agriculture, gas and oil activities and urbanization.

Recent studies have highlighted the ever troubling problems associated with the massive declines of Grassland Bird Species. It is an unfolding conservation crisis of massive proportions. Cumulative impacts are to blame. It will take concentrated, coordinated, and strategic actions to stem the downward spiraling trends of even some of the very common birds. We know that such events need not be inevitable – they require management and intervention. Government leadership is mandatory, and not a luxury to be downgraded on the list of important things to do.

Lastly, I want to end on a positive note - NATURE KIDS is up and running. This is a program with a new name (it was formerly called Young Naturalists) for family involvement and brings

youngsters between the ages of 4 to 12 in touch with the natural world. Jerry Gordy, the outreach Program Manager, has got things well in hand. We now have about 100 kids involved at eight different locations in the province. (See locations and names of volunteers with Nature Kids Programs on page 10.) That will be the future strength for Nature Alberta.

As President, I look forward to working, on your behalf, to making our society a strong voice for the greater appreciation and conservation of Alberta’s natural environment. You can help us by getting new members; our goal is to double the membership in 3 years. Start new clubs or help NATURE KIDS – it all helps getting the word out.

# Congratulations to the Houstons

Nature Alberta would like to extend congratulations to Mary and Stuart Houston on their **65th wedding anniversary** on Aug. 12.

The entire crew – children, grandchildren, spouses, fiancés - gathered for the first time in 65 years. The Houstons, members of Nature Alberta, are legendary birders in their home province of Saskatchewan.





# Nature Alberta NEWS

## May Plant Count Coming Soon

BY KIM MACKENZIE, P. BIOL.

The 2017 Nature Alberta May Plant Count is an annual event where volunteers survey their favorite natural areas to inventory the native flora (and sometimes fauna) during the last week of May. Phenology (life stage) information is also collected. Plants grow leaves or produce flowers at similar times each year but not at the same time each year. Comparing the same plants in the same area at the same time each year provides some fascinating insight into weather conditions each spring.

At current count, twenty-three locations were surveyed in 2016 but results are still trickling in so the actual results are expected to be higher. If summer is data collection season for botany enthusiasts, then winter is data compilation season!

As a new coordinator of this program last year, my focus was to understand the scope of the event, compile a list of volunteers and to collect the information provided. That focus lacked a consistent vessel to transport the May Plant Count information from the field to a summarized result and accordingly, volunteers provided data in the format they had used in previous counts or in any way that was comfortable for them to get the

job done. Results have arrived in a multitude of formats ranging from photos of handwritten lists to Excel spreadsheets that included the Alberta Conservation Information Management System (ACIMS) element codes and provincial S rankings. A search of the Nature Alberta servers has provided a good set of historical May Plant Count records that will also be compiled. However, some will first have to be converted from some antiquated file formats. All of the information, regardless of format, is valuable and appreciated.

All these data record formats are currently being compiled into standardized electronic tables. Why would anyone want to go through that effort? Nature Alberta has obtained Geographic Information System (GIS) software capable of storing our plant data in searchable spreadsheets and maps. Nature Alberta has also acquired a data nerd volunteer from the Alberta Native Plant Council who is willing to work on it. The data, data, data side of things might sound pretty boring, but that your annual trek and check through a favorite natural area provides information to inform your community about conservation, land use, or climate change.

The focus for 2017 will be to standardize the data compilation process by providing volunteers

## 2015/16 Annual Report Posted

The 2015/16 Annual Report approved at our AGM in October 2016 has been posted to our website. Check out our activities for the period 01 Apr 2015 through 31 Mar 2016 under the Annual Reports section at <http://naturealberta.ca/publications/>.



## 2016 May Bird Count results

The full May Bird Count data utilized for the summary report in our Fall 2016 issue is available on the Nature Alberta website. This site contains all count reports collated in digital format since 2006 when printed reports were discontinued. See: <http://naturealberta.ca/programs/birds-biodiversity/citizen-science-database>

with a standardized spreadsheet to fill in. By this time next year, with one press of a button, that spreadsheet will get loaded into our GIS and a map of all the results will pop up. Well, that might not be completely true but it might not be completely false either. This standardization will not result in the rejection of any data. Data is data and Nature Alberta wants it! Photos of handwritten lists and “I don’t know what this is but here is a picture” will always be accepted.

Identifying plants to a specific species can be a difficult task for beginners so many of our volunteers are very knowledgeable botanists. To grow the Nature Alberta Citizen Science volunteer army, we are looking for a few willing botany volunteers to teach plant identification skills to new volunteers during this next May Plant Count.

Data collection for May Plant Count is generally focused on the last weekend in May but any survey between Thursday, May 25 and Wednesday, May 31 will keep the data collection in alignment with previous years’ data.

Contact your local club if you would like to take part. Volunteers for the May Plant Count are always welcome, no matter how great (or not) your plant identification skills are currently. In addition, if anyone who would like to help to convert historical data into useful information, your help would be greatly appreciated. Please contact me at [kim.mack@goldpaw.ca](mailto:kim.mack@goldpaw.ca).

## “Tremendous Commitment”

FROM THE DESK OF BRIAN ILNICKI, NATURE ALBERTA EXECUTIVE DIRECTOR

Welcome to the Nature Alberta Magazine Winter Edition. Definitely a change in temperatures, but with the lengthening daylight hours, we are able to spend more time outdoors enjoying the crisp air and big blue skies of Alberta. Winter is a time for Nature Alberta staff to catch our breath a little, to finish off reports and program plans and to build upon what we have accomplished.

As I reflect on this past year’s achievements there is one constant that supports everything we do, and that is the tremendous commitment of Nature Alberta members. Whether assisting with Family Nature Night events, participating in the International Migratory Bird Day celebrations, serving as a Caretaker at one of the more than 40 Important Bird and Biodiversity Areas across Alberta or committing to improving the governance of the Nature Alberta Board of Directors, the dedication of Nature Alberta’s volunteers is truly amazing.

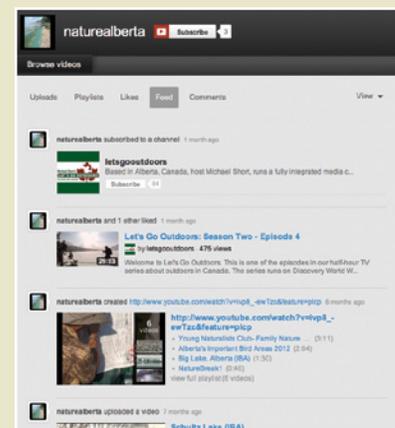
The many hours, days and (in some cases) weeks that so many contribute to Nature Alberta is testament to the passion people have for this organization and for Alberta’s natural heritage.

I am privileged to be able to work with such a great group of individuals; people who are intelligent, caring and extremely committed to their work and to what Nature Alberta stands for. As I reflect on this past year, I realize how fortunate I am to be able to play a small part in Nature Alberta. We are truly embarking on a new journey, one that is founded on and is respectful of our 45 years of history and experience, and yet is looking to advance our mission in new and innovative ways. It is an exciting time and I look forward to connecting with many of you over the coming months and helping to continue to build upon the solid foundation of this community connected by a love of nature.

## Nature Alberta & YouTube

Nature Alberta wants you to know that Nature Alberta has its own YouTube channel now. All kinds of “good stuff” is there for you to view. Visit:

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



## Nature Kids Grows!

BY JERRY GORDY, NATURE KIDS PROGRAM COORDINATOR

Since the start of the 2016 fiscal year, Nature Kids has added three new local chapters: Calgary (July), Grande Prairie (August), and Cold Lake (November). This brings the total number of Nature Kids chapters in Alberta to seven.

Calgary chapter leader is Katie Donohue, with ~7 member families/~10 kids ([naturekidscalgary@gmail.com](mailto:naturekidscalgary@gmail.com)). Grande Prairie's chapter leader is Alex Comeau and has 3 member families/~5 kids ([naturekidsgp@gmail.com](mailto:naturekidsgp@gmail.com)). Cold Lake's chapter leader is Richard MacDonald; there are no active members due

to chapter just recently starting ([naturekidscoldlake@gmail.com](mailto:naturekidscoldlake@gmail.com)).

In Edmonton, chapter leaders are Emily Dong and Alyssa Bohart, with ~30 member families/~50 kids ([naturekidsedmonton@gmail.com](mailto:naturekidsedmonton@gmail.com)). Lakeland's chapter leaders are Marianne Masters and Chantelle Adams with ~10 member families/~20 kids ([naturekidslakeland@gmail.com](mailto:naturekidslakeland@gmail.com)), and Morinville chapter leader is Leanne Boissonnault, with ~10 member families/15 kids ([morinvillenaturekids@gmail.com](mailto:morinvillenaturekids@gmail.com)). Red Deer, with chapter leaders Amanda and Natasha Lasiuta, has

no active memberships currently, due to one of the leaders recently having a baby and the chapter was not active during the pregnancy and after the birth. The chapter resumed operations in January and hosted a snow day event ([naturekidsrd@gmail.com](mailto:naturekidsrd@gmail.com)).

Nature Kids (formerly Young Naturalists) is re-vamping its programming and so we are anticipating to really expand membership and programming in each chapter in the upcoming fiscal year.

## 2017 International Migratory Bird Day Events

Alberta is home to many beautiful birds – and passionate birders. What's more, Albertans are lucky to have many opportunities to join naturalist clubs and experience migratory birds up close through International Migratory Bird Day (IMBD) or other "Bird Day" events. Read on to discover some of the exciting Bird Day events being offered in the spring of 2017 by Nature Alberta member clubs and partners.

It's that time of year again! Birds are journeying home for the spring and we hope you're ready for a series of events that celebrate the beautiful, migratory birds of Alberta.

International Migratory Bird Day (IMBD) first began in 1916. IMBD officially takes place on the second Saturday in May in Canada and the United States. However, because birds do not migrate on the same day, events are hosted by a variety of organizations from May through June, giving people ample opportunity to partake in the lovely spectacle of biodiversity and learn more about migratory birds.

Last year (2016) marked the Centennial of the Migratory Bird Treaty, a landmark agreement between the United States, Canada and Mexico to protect shared migratory birds; an international



**THEME FOR 2017 IMBD, 'HELPING BIRDS ALONG THE WAY'.**

effort to conserve birds through agreements, laws, treaties and collaborations. The need to raise awareness of importance of migratory bird conservation on a multi-national scale is ever present and we encourage Nature Alberta members and the public to attend one or all of the IMBD events



**FLIGHT OF SNOW GEESE NEAR TOFIELD.** KEI CHEUNG PHOTOGRAPHY

taking place this year to discover the many ways you, as citizens, can be involved in ensuring bird conservation efforts remain strong.

Several of Nature Alberta's member clubs are gearing up to host Bird Day events that raise awareness of migrating birds and their conservation risks, and encourage youth and adults to get involved in efforts to conserve bird species. Thanks to generous funding from TD Friends of the Environment Foundation, an exciting new edition to this year's events is the **IMBD Passport**. Participants who attend more than one IMBD or Bird Day event hosted by a Nature Alberta member club can have their passport stamped and be entered into a draw to win a terrific Nature Alberta prize. Full IMBD Passport details are available at [www.naturealberta.ca](http://www.naturealberta.ca).

The following IMBD events will be taking place across Alberta in April and May, 2017.

- **April 22-23, 2017 Snow Goose Chase:** The Edmonton Nature Club (ENC) is partnering with Nature Alberta to host the 18th annual Snow Goose Chase in Tofield. In addition to talks

from expert biologists, games and activities, families can view the migration of Snow Geese, Sandhill Cranes, hawks, various waterfowl and songbirds.

For more information about this event visit: <http://www.snowgoosechase.ca/>

"In addition to the general public and inner-city low income families, we invite participants from various agencies who help recent immigrants, refugees and new Canadians to attend the

Snow Goose Chase. This fun, interactive event brings nature to people who often don't get a chance to experience it," explains Bob Parsons, Director, Edmonton Nature Club. "It's very rewarding to see the excited and positive reactions from the children."

- **April 22-23, 2017 Swan Festival,** hosted by Friends of Saskatoon Island, Alberta Parks and Peace Parkland Naturalists, takes place in beautiful Saskatoon Island Provincial Park. At this event you can view the return of the majestic Trumpeter Swan. Activities include swan bus tours, games, crafts, face painting, displays and much more. For more information about this event visit: <http://peaceparklandnaturalists.ca/swanfestival>
- **May 27, 2017 International Migratory Bird Day** at Big Lake near St. Albert is hosted by Big Lake Environment Support

**UP CLOSE AND PERSONAL WITH BIRDS.** KEI CHEUNG PHOTOGRAPHY



Society (BLESS), the City of St. Albert and Alberta Parks. Guest speakers, live animal demonstrations and activities are included. For more information about this event visit: <http://bless.ab.ca/events.html>

“Big Lake is an Important Bird and Biodiversity Area and as such is surrounded by many beautiful birds,” says Miles Constable, Treasurer, BLESS. “I really love seeing people, especially youth, attend the Bird Day event and be excited about the wildlife Alberta is home to. These experiences inevitably make people more likely to help protect wildlife and become involved in conservation efforts.”

- **May 14, 2016 International Migratory Bird Day** at Inglewood Bird Sanctuary. The City of Calgary and the Inglewood Bird Sanctuary join forces to host this Calgary-based IMBD. For more information about this event visit: <http://www.calgary.ca/CSPS/Parks/Pages/Locations/SE-parks/Inglewood-Bird-Sanctuary.aspx>

- **May 27-28, 2017 Songbird Festival** Nature Alberta will be assisting the Lesser Slave Lake Bird Observatory with their wildly popular Songbird Festival which takes place at the Boreal Centre for Bird Conservation near Slave Lake. The event kicks off with a pancake breakfast followed by a variety of guided birding hikes, workshops and tours of the migration monitoring station. For more information about this event visit: <http://www.lslbo.org/education/songbird-festival/>

Check out the resources below to learn more about IMBD and birding events in Alberta:

- Get a comprehensive list of nature and bird events posted on Nature Alberta’s online calendar: <http://naturealberta.ca/about-us/events/>
- Learn more about Nature Alberta’s Birds and Biodiversity program: <http://naturealberta.ca/programs/birds-biodiversity/>

- Check out some quick facts on the state of North America’s Birds: Read: [http://www.stateofthebirds.org/2016/wp-content/uploads/2016/05/SotB\\_16-04-26-ENGLISH-BEST.pdf](http://www.stateofthebirds.org/2016/wp-content/uploads/2016/05/SotB_16-04-26-ENGLISH-BEST.pdf)

Migratory birds are among the most beautiful, observable and remarkable wildlife. They are symbolic harbingers of the seasons, provide countless economical and environmental services, and are indicators of healthy habitats. Public awareness and concern are crucial components of migratory bird conservation. Citizens who are enthusiastic about birds, informed about threats, and empowered to become involved in addressing those threats, can make a tremendous contribution to maintaining healthy bird populations. One of the most successful vehicles for engaging new environmental stewards is IMBD. <http://www.birdday.org/pdf/WhatisIMBD.pdf>

## Great News for Stewardship Groups

Over the past several months, Land Stewardship Centre (LSC) has been working closely with Alberta Environment and Parks, advocating for the reinstatement of provincial financial support for grassroots stewardship groups and the important work they are doing in communities across the province to the benefit of all Albertans.

Now, LSC is pleased to share with you that Minister Shannon Phillips

and Alberta Environment and Parks have **restored the Watershed Stewardship Grant (WSG) program funding.**

Alberta Environment and Parks (AEP) has approved multi-year funding totaling \$925,000 to LSC to help protect Alberta’s water resources, now and into the future. LSC will distribute this funding through the Watershed Stewardship Grant program beginning with \$250,000 in 2016-

2017, followed by \$225,000 for each of the next three years, ending in 2019-20.

“Land Stewardship Centre is an important partner in Alberta’s efforts to promote healthy aquatic ecosystems,” said Shannon Phillips, Minister of Environment and Parks and Minister Responsible for the Climate Change Office. “Programs funded by these grants will result in reliable, quality water supplies for a sustainable economy and safe, secure

drinking water which will benefit all Albertans.”

This funding commitment builds on previous provincial support for the WSG program, which supports local stewardship groups and their projects across the province. This multi-year funding of the WSG program will allow LSC's work, which supports the development of long term planning and community-based projects, to continue.

#### **ABOUT THE WATERSHED STEWARDSHIP GRANT PROGRAM**

The longstanding relationship between LSC and AEP goes back a decade. With funding from

AEP, LSC has delivered the WSG program in Alberta since 2006. In that time, more than \$1.8 million dollars have been allocated to 127 community-based stewardship groups across Alberta, with an additional \$5.7 million leveraged through partnerships.

Throughout the history of the WSG program, community stewardship groups have worked collaboratively with local municipalities, local land owners and land managers, Watershed Planning and Advisory Councils and other conservation organizations to design and deliver in excess of 300 projects. These groups and their projects have all contributed to bringing

the provincial *Water for Life Strategy* goals to life, and making healthy aquatic ecosystems, reliable, quality water supplies for a sustainable economy, and safe, secure drinking water a reality. Stewardship groups, enabled by the WSG program funding, have helped support the work of government on monitoring, developing management plans and increasing awareness.

For more information and to be advised of when LSC will be accepting applications for the next round of WSG funding contact us at [grant@landstewardship.org](mailto:grant@landstewardship.org).

## Advertising in *Nature Alberta*

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

Full details, including rates and sizes, are available at:



online: [www.naturealberta.ca](http://www.naturealberta.ca)

email: [na@naturealberta.ca](mailto:na@naturealberta.ca)

phone: (780) 427 – 8124



# Eyes on IBAs

## Three Lakes and a Phalarope: A look at the Mysterious Visitor of Killarney, Dillberry and Leane Lakes

BY BROOK SKAGEN

*The Killarney, Dillberry and Leane Lakes Important Bird and Biodiversity Area (IBA), approximately 26km northeast of Provost AB along the Alberta-Saskatchewan border, is comprised of shallow alkaline lakes, grasslands, temperate deciduous woods, tame pastures, marshes and mudflats.*

The site lies within the Central Parkland natural subregion, and is located within the Dillberry Lake Provincial Park boundary, providing year-round recreational opportunities such as angling, hiking, snowshoeing and camping.

Though it is one of Alberta's smallest IBAs, covering just 50km<sup>2</sup>, it is biologically diverse, with numerous species of mammals, fish, amphibians and birds found within the area.

A unique mix of songbirds, representing 3 of Alberta's natural regions, can be found throughout

the park, such as the Hermit Thrush (Boreal),

Lark Sparrow (Grassland), and Marsh Wren (Parkland). Breeding pairs of Piping Plover have been documented nesting along the shoreline of Killarney Lake, in numbers over 1% of the national prairie population, and shorebirds numbering in the tens of thousands are known to stop over during the spring and fall migrations, leading to the site's designation as an IBA and potential Western Hemisphere Shorebird Reserve Network site.

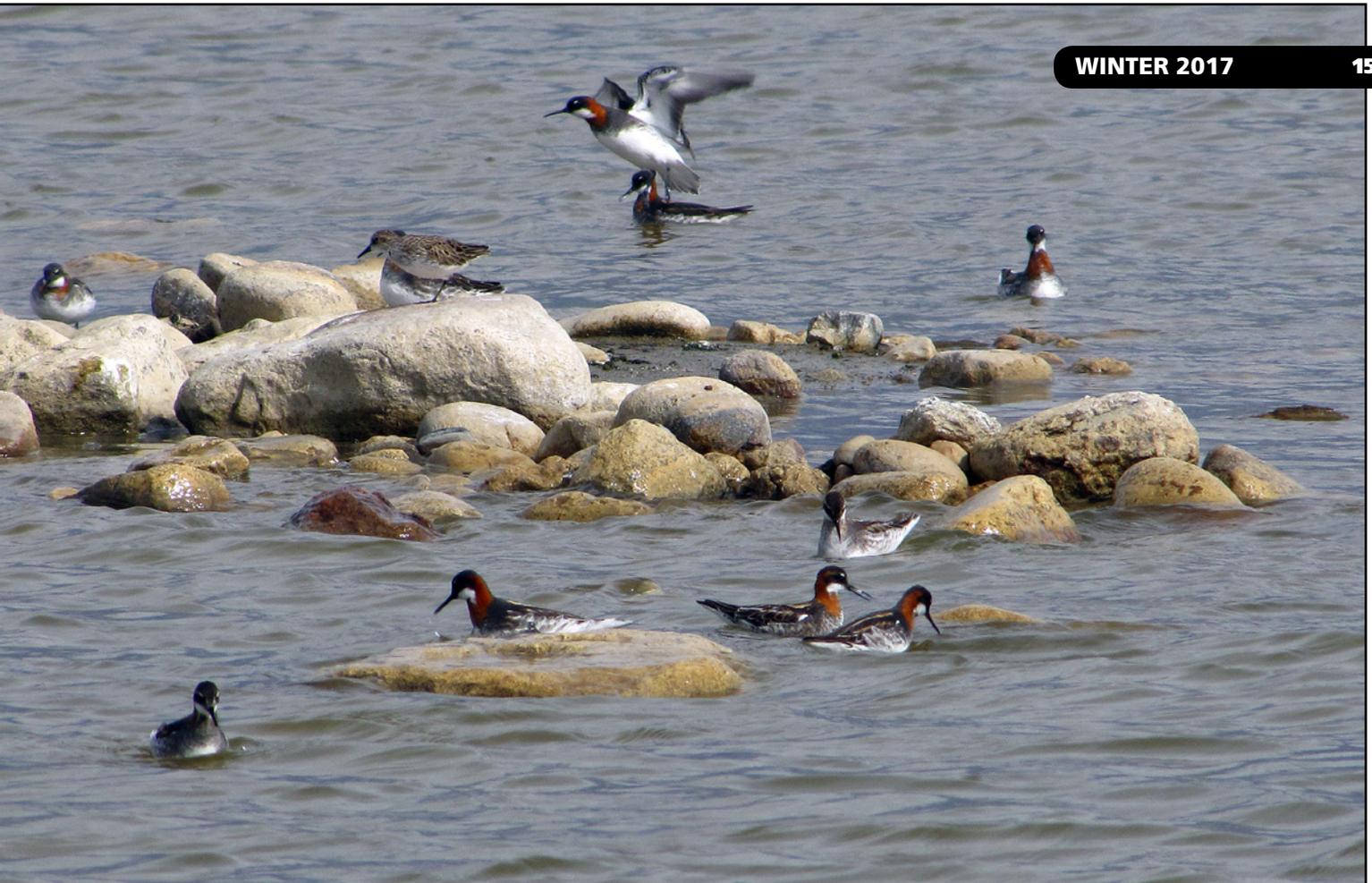
Perhaps no visitor to the IBA is as poorly understood as the Red-necked Phalarope. A delicate shorebird with a distinct rust-coloured neck during the breeding season, the Red-necked Phalarope is one of three phalarope species worldwide. The bird is incredibly widespread, migrating from its

Arctic breeding grounds to the coast of South America and the Arabian Sea, as well as moving from central Indonesia to western Melanesia, though exact migration routes are unknown. Unlike other shorebirds, phalaropes spend much of the nonbreeding season out in the open sea, making it difficult to accurately assess global population numbers and trends, as well as where exactly they distribute to during this time.

The North American population is estimated to be at least 2,500,000 individuals, though this number is merely speculation, and it is unknown whether this number has risen or declined in recent years. The uncertainty surrounding the stability of this species has contributed to its designation as a species of Special



*Brook Skagen  
Nature Alberta IBA intern*



**A WIDESPREAD BIRD, THE RED-NECKED PHALAROPE CAN BE FOUND IN EVERY PROVINCE AND TERRITORY OF CANADA. KEN ORICH**

Concern in Canada, though it can be found in every province and territory in the country. Despite of its vast distribution, the Red-necked Phalarope is one of Alberta's rarest breeding birds, with less than a handful of breeding occurrences documented in the province's northern boreal, though they are frequent visitors to the intermittent wetlands of the prairies.

Phalaropes are peculiar birds, both in form and behaviour. Their characteristically narrow & pointed bills suggest a life of shoreline foraging, yet it is on the open water where one will spot groups sporadically twirling in search of food. With lobed feet similar to the American Coot, the birds are able to generate a circular current, kicking up stationary invertebrate larvae within their reach, a

behavioural trait exclusive to the phalaropes.

Their reproductive strategy is just as unique, as all phalarope species exhibit reverse sexual dimorphism. Females are more brilliantly marked than their more subtle male counterparts, as they are the ones to compete for breeding partners. Female competition for males can be

**A GROUP OF RED-NECKED PHALAROPE IN THEIR NONBREEDING PLUMAGE. KEN ORICH**



quite tense, but nesting territories are not disputed over. Once the eggs have been laid, Females leave the males to tend to their young alone, abandoning all parental responsibilities. Phalaropes are often referred to as polyandrous, though this behaviour is not as common as the reputation suggests. What lead the bird to such an odd lifestyle is still unclear; there is much left to discover about the Red-necked Phalarope.

Conservation initiatives such as the IBA program are crucial pieces to the avian research puzzle. As global environmental threats such as habitat loss, degradation and climate change continue to rise, so does the urgency to conserve the habitats and wild spaces of which so many avian species rely on. This need is only amplified

for species such as the Red-necked Phalarope, of which so little is known, including how the widespread bird will adapt to such changes, or what these changes may mean for future populations.

As was wisely said by Aldo Leopold, "... if the land mechanism as a whole is good, then every part is good, whether we understand it or not...to keep every cog and wheel is the first precaution of intelligent tinkering." Only through the preservation of all the pieces, whether it be overwintering grounds, breeding habitat, migration stopovers, or a component yet to be foreseen, can we hope to gain a better understanding of the many unique and mysterious birds in need of much investigation.

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**THE MALE PHALAROPE (LEFT) IS MUCH MORE SUBTLE IN APPEARANCE THAN HIS FEMALE COUNTERPART (RIGHT). KEN ORICH**



## BOOK REVIEW

# Beauty Everywhere: Nature Photo Essays

REVIEW BY DENNIS BARESCO

It is, quite simply, a splendid and wondrous book! Yes, the essays are lively and exciting, so much so that you don't even realize that you have also been given a plethora of knowledge about the wildlife being focused on in any particular chapter.

And chapters there are: 61 of them, each one only two pages long – including photos - which makes the book a very easy read...except you'll probably want to re-read it just for the sheer pleasure.

But it is the photos in conjunction with the essays that give *Beauty Everywhere* its specialness and its life. Each chapter is only two pages but a page, to a page-and-a-half, is photos (with captions). I was aware that Myrna was a very fine photographer; still, I was overwhelmed by the life in each shot: a Snowshoe Hare reaching for some vegetation, a fledgling Bufflehead soaring from a nestbox while another one is just stepping off; a bluebird having a bath; a family of grebes – well, you have see it; even flying ants communicating with their queen!

And do not forget to read the photo captions. Like the text, they contain a great amount

of information, even though brief – succinct is the definitive word.

“Myrna Pearman,” it says on the back cover, “is a naturalist, photographer, educator, writer, wonderer and wanderer.” She has written (or co-written) books before, her latest being *Backyard Bird Feeding: an Alberta Guide*, an excellent guide. But with *Beauty Everywhere*, she has truly outdone herself.

It also says on the backcover: “Her goal is to inspire others to

## Beauty Everywhere:

NATURE PHOTO ESSAYS BY MYRNA PEARMAN



*If you truly love nature, you will find beauty everywhere.*  
VINCENT VAN GOGH

**Myrna Pearman**

Soft Cover/Perfect Bound. C\$24.95, 128 Pages  
ISBN 978-0-9953355-0-9

find beauty everywhere.” Without a doubt, to say that Myrna has succeeded in her goal is a great understatement. It is, quite simply, a splendid and wondrous book.





# New Conservation Area Contains Rare Oxbow

*Larch Sanctuary, a spectacular part of Whitemud Creek Ravine, is now under the permanent stewardship of the Edmonton and Area Land Trust (EALT).*

“My mother, Barbara Poole, loved to walk along the top of the ravine, watch for moose tracks and listen for owls”, recalls Peter J. Poole. “Our family loves nature. The people of Edmonton need the City and the Land Trust to succeed at protecting nature.”

The Poole family and Melcor Developments Ltd., the landowners, are celebrating City Council’s recent decision to issue a Conservation Easement. The Easement ensures the Sanctuary’s unique oxbow and surrounding natural habitat are protected as Edmonton grows.

“It’s wonderful”, says Pam Wight, EALT’s Executive Director.

“Despite being inside a major city, Larch Sanctuary retains remarkable biodiversity. It is a wildlife corridor and home to dozens of native species.”

Melcor is committed to building communities that enrich quality of life. “This Conservation Easement fits that mandate,” explains Michaela Davis. “It is part of making Edmonton a great place to live.”

Larch Sanctuary is: vital to wildlife – 80% of Alberta wildlife need an intact riparian area



in their life cycle; home to Alberta’s smallest amphibians, Wood Frogs & Boreal Chorus Frogs; nesting ground for 42 different types of birds; a mix of century-old White Spruce, deciduous forest and regenerating birch trees; 58 acres connected to the River Valley system; and a protected place where Edmontonians can easily connect with nature.

There will be public event to celebrate the Conservation Easement and the Sanctuary on Saturday April 29, 2017.

MOOSE MOTHER WITH CALF. EALT

EALT



# In Memoriam

## Peter Demulder

BY: KEVIN MA, ST. ALBERT GAZETTE

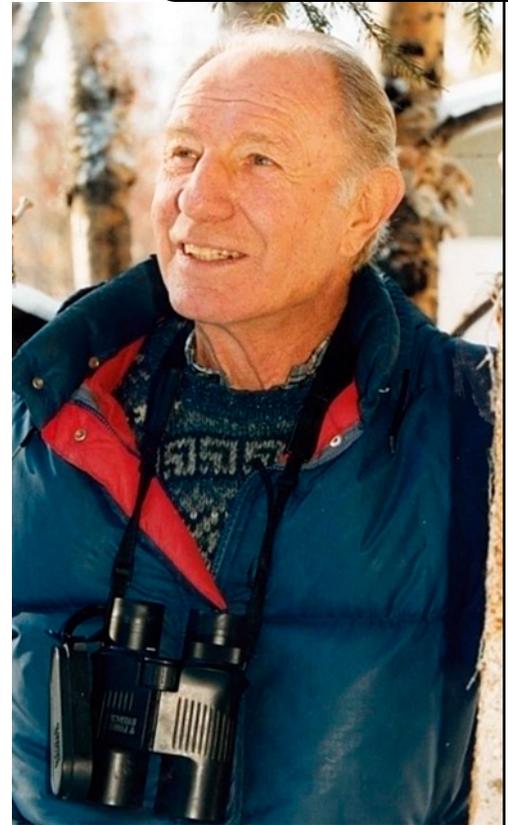
Veteran birder and St. Albert resident Peter Demulder died Dec. 2 at age 87. Known to some as the Birdman of St. Albert, Demulder was the founder of the St. Albert Christmas Bird Count and one of the city's foremost amateur ornithologists, famous for his uncanny ability to identify and reproduce almost any bird call. Even in his final days, Demulder could still identify a bird with just a few hints and a recording of its song, said his son Bob. "He could still nail that sort of thing right up until the end."

Born in Ostend, Belgium, in 1929, Demulder grew up watching migrating terns and other birds soar past his home each year, effectively making him a birder by default, Bob said. "He was always fascinated by them." Long-time friend Dan Stoker described Demulder as a friendly, if sometimes curmudgeonly, man with a great smile. "He really, really enjoyed communicating to kids and being in front of a classroom," Stoker said, holding many of them spellbound as he demonstrated bird calls.

Demulder was a huge fan of the outdoors, always taking the family canoeing and camping, Bob said. Despite the depth of his birding knowledge, Bob said Demulder never had any formal training as an ornithologist, picking up all he knew from books and experience.

Demulder got his start with bird counts back in 1964 when he joined the Edmonton Christmas Bird Count, said Alan Hingston, co-ordinator of the St. Albert count. In a 2010 interview with the Gazette, Demulder said he started the St. Albert count in 1991 to help members of the new Big Lake Environment Support Society (of which he was a founding member) track trends in bird populations. Demulder never used a computer, instead co-ordinating counters by phone and in person and recording everything in a laboratory notebook, Hingston said. Although he handed off leadership of the count to David Nadeau in 2003, Demulder stayed on as an active participant until at least 2013.

Demulder's work with the count soon made him the point-of-contact for anyone who spotted a



**PETER DEMULDER**

strange bird in St. Albert, Hingston said. "He became known as the local bird-man of St. Albert."

Demulder led by example in his advocacy for the environment, and was a regular volunteer with the Edmonton Nature Club, the Clifford E. Lee Nature Sanctuary and the Beaverhill Bird Observatory, said Lu Carbyn of Edmonton's Wildbird General Store. "He transmitted an enthusiasm and love for nature that was very infectious." Edmonton naturalists were very sad to hear of his death, particularly as it came just a few months after the passing of his wife, Carbyn said. "It made your day to meet Deirdre and Peter." His children, Jill, Sally and Bob, and grandchildren Mark and Siobhan survive Demulder.

## FEATURE ARTICLE

# Deer in Jasper National Park

BY DICK DEKKER

## Is predation a factor in the opposing population trends of the native Mule Deer and the invasive White-tailed Deer?

One March afternoon, while walking along a game trail on an open ridge above Jasper Park's Snake Indian River, I spotted a female White-tailed Deer bounding along into my direction. I stopped and she halted two metres away, her mouth agape, tongue protruding. Her eyes seemed glazed over with fatigue and fear. After a moment of hesitation, she darted by at arm's length to resume her headlong flight. Suspecting that she was being chased, I moved aside a few steps to hide behind a spruce tree. Seconds later, a grey Wolf, red tongue lolling, came loping down the trail. Just a few metres

away, he suddenly spun around and dashed back the way he had come. As much as I dislike interfering

in the lives of wild animals, I had involuntarily saved the life of this defenceless deer.

Over much of North America, deer are the optimum prey species for Wolves. Compared to moose or elk, deer seem easy to kill, even for a single Wolf, but catching one is another matter. David Mech, America's foremost Wolf researcher, reported that he once followed a radio-tagged Wolf from the air. With three companions the Wolf began to chase a White-tailed Deer. After two hours the plane had to return to base for refuelling. In the meantime, the radio-collared Wolf had lost his two companions, but he was still hot on the trail of the deer and had already covered a distance of just over twenty kilometres through the snowy forests of Minnesota. Dr. Mech never learned the outcome of this unusually long chase.

In Jasper National Park, over 50 years of observations, I have seen

Wolves in hot pursuit of deer, but the final act was always hidden from view. When I came across the remains of a freshly killed deer and back-tracked the Wolf, I discovered that the chase had actually been very short. The successful Wolf had attacked down a steep slope and intercepted its prey in deep snow below the hillside.

Zoologist Valerius Geist (1998) points out that a Mule Deer, in hilly habitat, may be less vulnerable to pursuing predators than a white-tail. Fleeing in its characteristic high bounding gait with all fours off the ground, which is called stotting, a Mule Deer can clear hurdles in broken terrain and quickly ascend steep slopes where predators lag behind. Fleeing over open ground, though, might be risky.

Bigger and heavier than the white-tail, a Mule Deer buck can put up a good defence as long as his vulnerable back side is protected. His forked rack has a greater span than the antlers of a white-tail buck



**A BIG ANTLERED MULE DEER BUCK. THE ANTLERS ARE FORKED AND MUCH LARGER THAN THE ANTLERS OF WHITE-TAIL BUCKS. GERALD ROMANCHUK**



**A WHITE-TAILED DOE WITH TWIN YOUNGSTERS (YEARLINGS) LOOKING AT THE OBSERVER.** MARK BRADLEY

and can be turned into a lethal weapon.

On a very cold November morning in 2010, co-observer Brian Genereux and I were looking at the semi-open mountain sides to the west of Jasper Lake. Scanning the slopes through binoculars, we discovered three Wolves -- two blacks and a grey -- hanging around by a dense clump of evergreens. Their hesitant behavior seemed puzzling. Another black Wolf was lying asleep higher up on the crest of the slope, as if he or she was recovering from a long chase. After some twenty minutes, the three Wolves joined the single Wolf and all four disappeared over

the wooded ridge where snow lay deep. Elated to have seen the local Wolf pack, we kept scanning the slopes, and presently, to our surprise, a big-antlered Mule Deer buck stepped forth out of the evergreen bush by which the three Wolves had been loitering. The way I see this happenstance observation is that the dapper buck had managed to save his life by pressing his rump against the protective screen of spruce branches, and presenting the pointed daggers of his huge rack to keep the Wolves at bay.

The following week in the same general area, sharp-eyed Wes Bradford, a retired Jasper park

warden who was guiding a nature film crew, spotted two black Wolves sleeping on frozen Jasper Lake near a downed Mule Deer buck, which appeared to have sustained a bloody wound in his back side. Later that day, the same observers saw a large grey Wolf approach at a trot. The buck quickly got to his feet and unhesitatingly gored the charging Wolf, which yelped in pain and limped off. Next morning, there were four Wolves sleeping on the ice and the deer had been consumed. Later that winter, on two memorable occasions, Brian and I watched the pack of four again, travelling down the Snake Indian valley; the three blacks in the lead, the big grey following at some

distance. Every now and then the blacks waited for their limping companion to catch up.

### THE HISTORICAL DEER POPULATION

The native ungulate fauna of North America includes the White-tailed Deer (*Odocoileus virginianus*) and the Black-tailed Deer (*Odocoileus hemionus*). The white-tail is originally an eastern and southern species that was at a very low ebb in the 17th century, due to unlimited hunting, but it has since greatly increased and expanded its range. The white-tail is now the most common ungulate in North America. Valerius Geist (1998) attributes the white-tail's success to its resistance to parasites and diseases that limit its potential competitors in the

northern climate. No doubt, legal protection and good management have been of major importance too.

The Black-tailed Deer is a western species of the deer family and its largest subspecies is the Mule Deer (*Odocoileus hemionus*), which ranges from California to Arizona and north to Yukon. Mule Deer and white-tails can interbreed and produce hybrids, which may or may not be fertile. The two species eat the same foods, and on sympatric range there is no inherent conflict between them. In the long run, though, the white-tail appears to dominate. For instance, as reported by Dewey Soper (1964), in southern Manitoba prior to European settlement, the original deer population was composed

almost solely of Mule Deer; and the present situation is reversed with a preponderance of white-tails.

In Alberta, White-tailed Deer were only rarely seen in the southwest of the province during the 1950s, until they gradually spread northwards. White-tails began to appear in the Rocky Mountains of west-central Alberta in the 1940s, and the earliest record for Jasper National Park (JNP) is 1943 (Holroyd and VanTighem 1983). The JNP population increased during the 1950s and 1960s, particularly in semi-open habitats of the lower Athabasca valley (Soper 1970). At higher elevations along the upper Snake Indian River, a tributary of the Athabasca, where I began a 20-year mammal survey in 1965, I recorded the first White-tailed Deer in 1980 (Dekker 1985)

A PAIR OF MULE DEER ON A WOODED HILLSIDE IN JASPER, WARILY LOOKING IN BOTH DIRECTIONS. DICK DEKKER





**A PAIR OF MULE DEER DOES, SHOWING THE DIAGNOSTIC BIG EARS AND THE WHITE RUMP WITH THE SHORT, BLACK-BANDED TAIL.** MARGRIET MONTIZAAN

Mule Deer were scarce in JNP until the park's establishment in 1907. Following effective protection from hunting, they became common in the valleys and seasonally at higher elevations. Cowan (1947) reported the densest concentration of Mule Deer in the lower Athabasca valley, where I began a yearly census of large mammals in 1981.

#### **A LONG-TERM COMPARISON**

Over 34 winters, between October and March from 1981 to 2015, I spent 718 observation days in the district of Devona, frequently accompanied by (the late) Peter DeMulder or Brian Genereux. Getting there on foot, we arrived in the afternoon of the first day and left again in the afternoon of the last day. A three-day trip involved two overnights and was counted as two complete days in the field, because it included two early mornings and two evenings of observation time.

From a high lookout hill, we scanned the semi-open montane meadows and the river flats through binoculars or a scope.

We spotted 425 deer, of which 270 (64%) were white-tails and 155 (36%) mulies. Sightings of white-tails increased significantly from 0.08 per day in 1981-1985 to 1.08 per day in 2010-2014. In contrast, over this same time span, mulies declined from 0.40 sightings per day to 0.06 per day. When added together, all deer, either mulies or white-tails, increased from 0.48 per day in the first five years to 1.13 per day in the last five years. Total sightings of deer more than doubled over time indicating that the decline in Mule Deer was offset by the increase in white-tails.

These results clearly show that White-tailed Deer have increased in the study area over the past 34 years and that Mule Deer have declined. However, the primary

cause of these opposing trends in abundance is not clear. One possible factor is Wolf predation. Before the proliferation of white-tails, mulies were the main prey of Wolves in JNP (Carbyn 1975), and Mule Deer remains were identified in 28% of Coyote scats collected at Devona during the mid 1970s (Bowen 1978). A territorial pack of 2-13 Wolves has been present in the district since the 1960s (Dekker 1998; and unpublished data). Wolves are known to kill Coyotes, and our sightings of Coyotes at Devona declined from 0.2 per day in 1981-2001 to 0.03 per day in 2001-2006 (Dekker 2001, 2008). In 2007-2015 the rate of local Coyote sightings dropped to 0.02 per day.

Cougars also prey on deer. Their tracks in snow were found each winter, and the big cats were occasionally encountered on open slopes frequented by Bighorn Sheep (*Ovis canadensis*) wintering in the Devona district. Cougar predation was found to have a disproportionate effect on Mule Deer compared to white-tails in a published study from southern British Columbia. The impact of Cougars on deer in JNP is not exactly known, for these powerful predators also take down elk and sheep.

The opposing population trends of the two deer species recorded at Devona can be compared to a list compiled by JNP staff of 191 deer killed on park roads and highways. Although these casualty figures may be somewhat compromised by the likelihood that mammalian scavengers, such as bears and Wolves, tend to drag carrion into cover, thus reducing the chance that it is found by JNP staff, the road kill

data roughly parallel my results. The traffic toll of White-tailed Deer rose from zero in 1980-1984 to 17 in 2010-2014. However, these figures are no true reflection of deer population trends in the park's traffic corridors for they are affected by the increasing traffic on the roads that transect JNP. Vehicle counts on the Yellowhead Highway in the lower Athabasca Valley of JNP have more than doubled from 0.8 million per annum in 1980 to 1.7 million in 2014 (Alberta Transportation Points Traffic Volume History 1962-2014).

In contrast to the rising number of White-tailed Deer fatalities, the road kill of Mule Deer in JNP has stayed the same, with 14 mortalities in 1980-1984 and 14 in 2010-2014. Given the reported doubling of vehicle counts in the lower Athabasca Valley, the road kill of Mule Deer should proportionally have been higher by a corresponding factor. The fact that it has stayed the same suggests a declining Mule Deer population in the traffic corridor, which is in accord with the results I reported from Devona.

Deer inhabit semi-open terrain and tend to avoid closed forests. Tree clearing along an oil pipe line corridor transecting the Devona district may well have played a role in attracting deer, and the white-tail is believed to be better able than the Mule Deer in taking advantage of man-made openings in forested habitats.

Forest maturation has been progressing naturally in JNP ever since the park's establishment

in 1907 when wild fires were controlled. And vegetation succession has been ongoing in the montane zone for over a century. Repeat photographs taken from my observation hill show that formerly open meadows and grassy slopes are increasingly studded with seedlings of white spruce, while the maturation of copses of spruce trees growing on the local flats has restricted the view from the lookout hill. These factors could have acted independently or in concert to enter a bias in my sighting methods.

Notwithstanding all of the above, deer sightings per day have more than doubled from 0.48 to 1.13 per day. The influx of White-tailed Deer has not only led to a decline and replacement of Mule Deer, but also to an increase in the total deer population in the Devona district of Jasper National Park.

Based on statistical analysis, the difference in population trends of the two deer species at Devona is indeed significant, but the answer to the question posed in the subtitle of this article remains unclear. Although predation is no doubt an important factor in the ecology of JNP's large mammal fauna, whether it affects one species of deer more than the other remains unknown. The amazing fact is that the wily white-tail has managed to expand its range continent-wide and that it is now thriving in the western mountains despite the presence of a range of large predators.

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# The Caribou of Jasper National Park:

## A Population Under Threat

BY MO SELLMAN

*High in the mountainous forests of Alberta, the caribou that call Jasper National Park home roam far away from people and predators. For these elusive creatures, surviving Alberta's frigid, snowy winter comes naturally.*

These statuesque ungulates stand approximately 1.2 meters at the shoulder and weigh between 110-210 kg. When the mercury drops below zero, a compact body with small ears and tail helps minimize heat loss. A specialized thick coat comprising two layers of fur - a fine undercoat with hollow guard hairs overtop - provides extra insulation. With even their muzzle protected by fur, the cold is certainly kept at bay.

As caribou wander across the boreal forest, they nimbly navigate deep snow without sinking due to broad concave hooves that splay when they walk. These snowshoe-like hooves have sharp edges that



WOODLAND CARIBOU. [WWW.NATURESPICSONLINE.COM](http://WWW.NATURESPICSONLINE.COM)

act as ice grips and give them extra stability. Their wide curved hooves also act as snow shovels to scoop up snow as they paw the ground to reach lichens they graze on over winter. Their characteristic pawing behaviour is thought to be why they are called caribou. The name is believed to come from the Micmac word "xalibu" meaning "one who paws".

Caribou are a type of deer in the same family (Cervidae) that includes Moose, Elk, White-tailed Deer and Mule Deer. But unlike these other types of North American deer, both male and female caribou can grow antlers. Historically, caribou classification has been difficult; however, more recently, genetic testing has been able to confirm caribou of N.

## MOUNTAIN CARIBOU (MALE).

[WWW.NATURESPICSONLINE.COM](http://WWW.NATURESPICSONLINE.COM)

American and reindeer of Europe are the same species, *Rangifer tarandus*. Currently, caribou are classified into ecotypes based on where they live, how they look and their behaviour.

The three main types of caribou found in Canada are Woodland, Peary and Barren-ground. Barren-ground caribou can be spotted migrating in large herds across Canada's tundra. The islands of the Canadian Arctic Archipelago are home to the least understood Peary caribou. Woodland caribou inhabit Canada's boreal forests and are non-migratory. Woodland caribou are further subdivided into mountain and boreal; with the caribou of Jasper belonging to the mountain ecotype.

Adapting to the mountainous terrain is part of everyday life for Jasper's caribou. Seeking respite in mature, unspoiled forests, they retreat to higher elevations during winter to avoid other ungulates (hoofed-mammals such as deer and elk) and their predators (e.g. bears and wolves) found in Alberta's woodland. A pregnant female will retreat further into the mountains in late May or early June to protect her calf from predators. Until recently, the caribou of Jasper migrated between the foothills in the winter and the mountains in the summer. But now, due to increased habitat

disturbance, these caribou tend to remain in mountainous regions all year round.

These wild, unpolluted mountainous forests of Alberta provide caribou with an abundance of lichens to graze on. This energy-rich food source comprises the majority of their winter diet; a truly remarkable feat as no other large mammal can survive primarily on lichen. Typically Jasper's caribou will stay in lower snow-pack areas as they depend on terrestrial lichens, primarily *Cladina* and *Cladonia* species. If the snowfall has been particularly deep, they can munch on boreal lichens such as *Bryoria* and *Alectoria* species instead. Fresh vegetation such as grasses, sedges and willows are sought in the spring and summer to supplement their lichen rich diet. Caribou have also been known to enjoy a tasty snack of flowers and mushrooms when nature provides.

Both human activities and natural disasters affect the habitat of caribou. From industrial endeavours to vehicle collisions to recreational activities, caribou habitat is being disturbed and fragmented. When caribou numbers are low (like those in Jasper), and populations are decreasing, the populations are more likely to continue declining because the herds are extremely vulnerable to disturbance.

But not all threats are anthropogenic. Any disturbance to caribou habitat such as forest fires, insect outbreaks and avalanches pose significant natural threats to caribou. For example, an



avalanche in 2009 killed the last five individuals of the Banff herd. Forest insects can kill trees and have a knock-on effect on the forest flora. In fact, a noticeable decrease in terrestrial lichens has been observed due to the BC and Alberta Mountain Pine Beetle epidemic. After a forest fire strikes, the valuable and slow growing lichens are destroyed. In Alberta, a scorched forest can take 40 to 80 years to mature and become suitable caribou habitat.

There are three herds that live in Jasper National Park: the Tonquin, Brazeau and Maligne herds. A fourth herd, A La Peche, moves between the national park and more commercial forest to the north.

Parks Canada has been monitoring the numbers of these four herds since the 1970s and has observed a steady decline in numbers. The concern over their dramatic decline has led to both provincial and federal designation of these creatures as threatened. To monitor these herds, caribou numbers are counted every fall using several methods including aerial surveys and DNA scat analysis; a pretty handy tool that can accurately identify individual members of each herd. The latest survey in fall 2015 estimates the number of individuals in each herd as follows: 30-34 in Tonquin;



13-15 in Brazeau; 3-5 in Maligne; and 88 in A La Pêche.

As well as this monitoring, Parks Canada has implemented a number of strategies to help protect these caribou. One effective strategy has been closing trails in Jasper National Park during the winter months. This prevents the snow on trails becoming compacted thus limiting wolf access to caribou's deep snow habitat. GPS collars and remote cameras are also used to monitor wolf activity in caribou habitat to better understand how wolves and caribou share the landscape.

While many threats to caribou exist, efforts to protect them are ongoing. A key part of their success is education as a little knowledge goes a long way to

protecting these vulnerable herds. With greater awareness of these beautiful, elusive creatures, and multiple conservation efforts, hopefully they can remain a feature of Alberta's landscape for generations to come.

#### ACKNOWLEDGMENTS

I would like to thank Steve Young from Parks Canada for providing up-to-date information about the caribou herds and conservation efforts in Jasper National Park.

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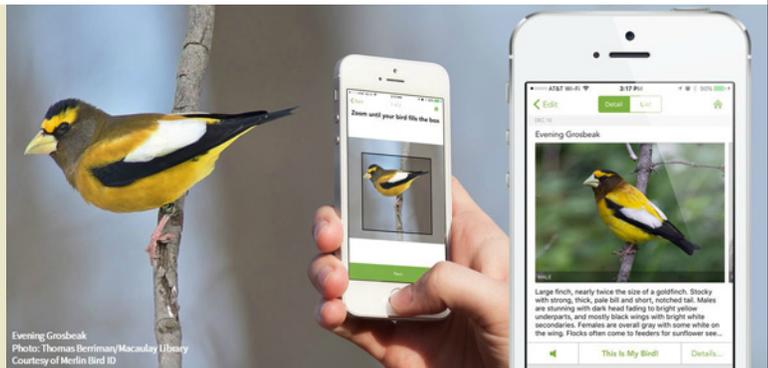
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# An App to ID Your Bird Photos

FROM CORNELL LAB OF ORNITHOLOGY



That's right: our Merlin Bird ID app just got an upgrade that analyzes photos on your phone and offers bird ID suggestions.

Just snap a photo or choose one from your photo library, answer a couple of questions, and Merlin will offer smart suggestions about what North American species it might be. Read more at eBird or download Merlin free for your iOS or Android device and try it out.

Can't Get a Photo? Merlin still offers uncannily good ID advice from a simple bird description—now expanded to feature 650 bird species.

# The Garden Watchers: Bees & Flowers in Edmonton

BY MORRIS LEMIRE AND HAL HOPKINS

*When it comes to learning more about garden insects, where does one start? All too often we start with the “pests”. What is eating our beloved roses? And we go from there. But what if we turned that approach on its head and learned just a little more about the most beneficial insects in your garden, the pollinators, particularly our native Alberta bees?*

This article is based on our experience over the past season planting flowers and watching bees. We offer the reader some practical tips and basic information on blossoms and bees in the hope that you too may become a bee enthusiast.

In 2015, as members of community gardens wishing to improve pollination rates, we designed and built bee-nesting boxes to attract bees to our gardens (See *Nature Alberta*, Fall 2015). We soon learned that to attract pollinators to our gardens we couldn't just wait for our fruit and vegetables to flower. We needed flowering plants throughout the growing season, from early spring to late fall. So in 2016, we planted two perennial flowerbeds to complement existing beds, shrubs and fruit trees.

From these two activities, we realized that we wanted to know more about bees and the flowers they pollinate in the Edmonton

area. Thus, we decided to survey several gardens in and around the city: the Edmonton Organic Growers Guild (EOGG) on south campus, the Devonian Botanic Gardens (DBG), The Muttart Native Perennial Bed, and our own home gardens. Let's start with the bees we observed and then outline the plants that they found most inviting.

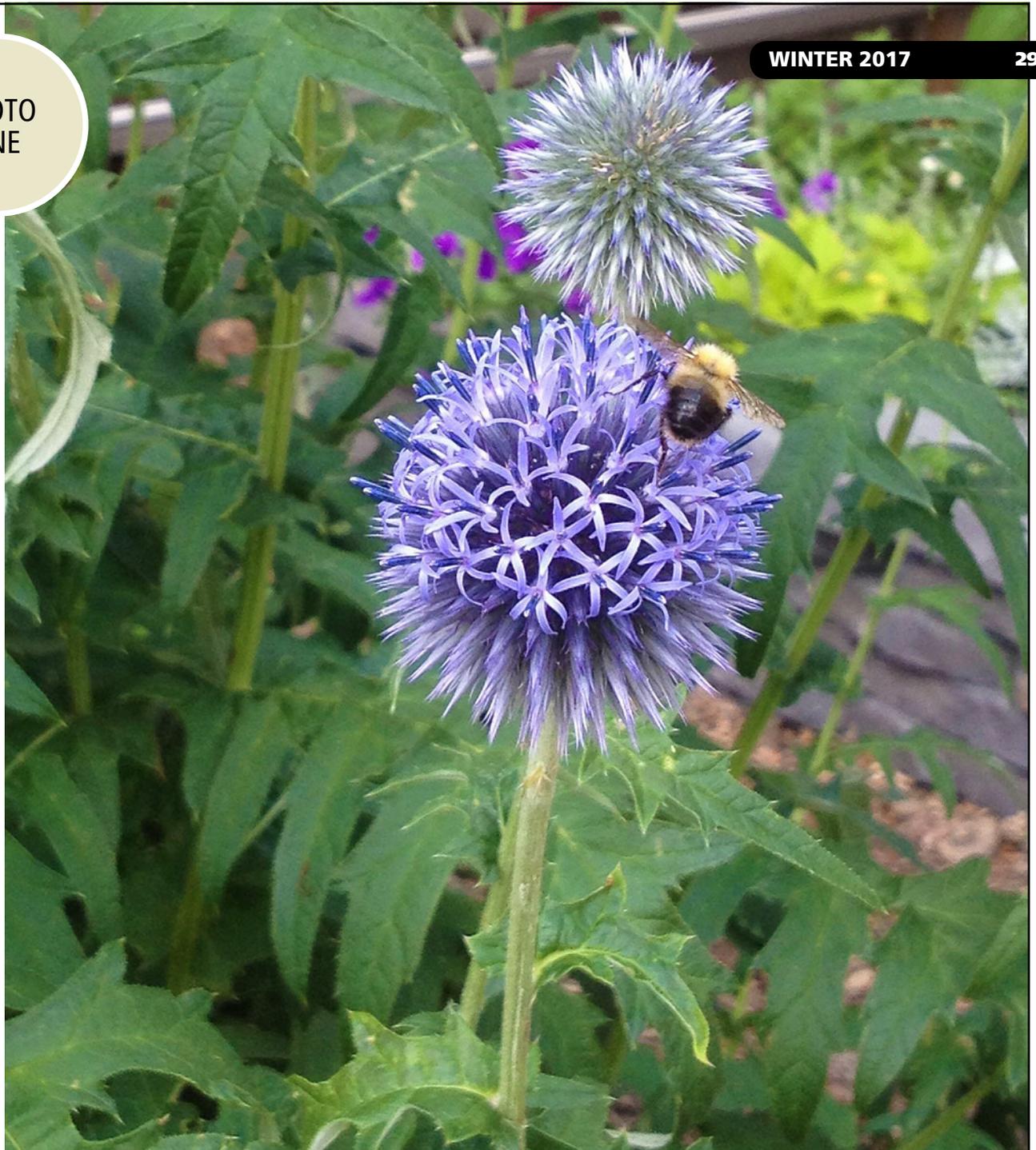
From the beginning of April 2016, we were reminded that when it comes to bee watching, the bumble bees (*Bombus spp.*) (photos 1 & 4) based on sheer size, sound and longevity of the colony, dominate the garden landscape. This seems surprising, as they constitute less than 10% of Alberta's native bee species. But their robust size and hairy jacket allow them to forage in wind and rain. As a genus, they are long lived, out from early spring to late fall, busy from morning to evening. They seem ubiquitous.

So while we can't ignore the genus *Bombus*, let's start with a little more detail on the lesser-known solitary bees. Solitary bees are so named because the female lays her eggs in her own separate nesting hole, some above ground, but most under ground. For example, at the Devonian Botanic Gardens (DBG), which has predominately sandy soils, Hal saw a species of *Andrenidae* bee that he didn't see anywhere else, certainly not on South Campus where clay predominates. The entrance to a nesting burrow with bees is illustrated in photo 2.

Unlike bumblebees and honeybees, solitary bees live and work alone. Although there are exceptions, generally speaking, they lay their eggs in separate chambers and provision the cells on their own, as we have seen with our bee nesting boxes (photo 5).

Those crescent moons neatly cut from leaves on your roses are the work of leaf cutter bees,

PHOTO  
ONE



A HALF-BLACK  
BUMBLE BEE  
(*BOMBUS SP.*) ON  
GLOBE THISTLE  
(*ECHINOPS  
RITRO*). BEVERLY  
LEMIRE

*Megachile*, a genus of native solitary nesters. They use leaf cuttings to line their nest cells (photo 3). We hope you will be lucky enough to see a leaf cutter bee flying off with a piece of your beloved rose. It is truly amazing.

Solitary bees are not well known to the general public. This group of bees is very diverse and our

observations certainly supported this. Some are tiny, as little as several mm. They can look like flying ants or even little wasps. The yellow-faced bee (*Hylaeus sp.*) is a perfect example measuring a mere 4.5-7 mm and because some have many yellow highlights, they appear like small wasps. Some have iridescent colours of bottle

green, metallic blue, or copper, which increases the chance of mistaking them for small flies. For instance, several Alberta mason bees (*Osmia spp.*) which are dull metallic blue to dark blue when viewed at a glance, look just like a common blow fly. *Megachile spp.*, the leaf cutter mentioned above, come in different sizes, ranging

from several small ones that start at 8 mm to *M. inermis* that is 18 mm long. Irrespective of size, they all have light grey to light brown hair on the thorax and a black arrowhead-shaped abdomen with white stripes. One key to distinguishing bees from other insects is a conspicuous yellow drop of pollen on their back legs or belly. (H. Hopkins, field notes, 2016)

Solitary bees usually produce one generation per season, whereas bumble bees, honey bees and wasps produce several. As a group of over 300 different species, they are around all season, so even though each species is alive for a relatively short time, 4 to 6 weeks, individually and collectively, they are highly effective pollinators. So consider this. If we spray insecticide to keep our roses perfect, we risk killing the female and her whole brood, to say nothing of other insects in your garden, including, of course, the bumble bees.

These smaller, silent, solitary bees seem a bit shy, more illusive. However, you can still get in very close with a camera or a magnifying glass if you are patient. This close proximity to bees can be a bit unnerving, but keep in mind that these little bees don't sting. This past season, using a magnifying glass, we got centimeters away from a solitary bee only to have a large bumble bee land on the flower and disrupt the whole effort. The big bee wins your eye and the little bee slips away. Let's take a closer look at big, sonorous *Bombus*.

Unlike solitary bees, bumble bees live in colonies that are composed of queens, workers and drones. The queens emerge from hibernation and start foraging on the early spring blossoms. As they gain strength, they search for abandoned rodent nests or other cavities to find a place for their nest. These nests are commonly located underground or in the walls of buildings. As the queen starts to lay eggs for the first generation of her colony, she is also busy gathering pollen and nectar to feed them. So the very first bumble bees you see in the spring are these queen bees which are always much larger than the rest of the bees in the colony.

When her first brood of workers emerges, the queen shifts from foraging and tending her young to solely producing eggs for the colony. The first generation of workers start to forage in mid spring and we noticed the following: "The first brood of females produced by the colony is of small workers, subsequent workers increase in size as nutrition improves and as worker assistance increases" (Gulan, P. J., Section 12.2.10). By late spring and early summer the second generation of the colony starts to appear. These later generations

## PHOTO TWO



**LEAFCUTTER BEES (*MEGACHILE SP.*) NEAR THEIR GROUND NEST ENTRANCE.** IRIS BARRINGTON LEIGH

of normal size workers continue to populate your garden into late summer (H. Hopkins, field notes, 2016).

With the signs that summer is coming to an end, life within the colony shifts yet again. The old queen starts to produce drones and new queens, instead of the regular brood of workers. This signals the end of this year's colony as it sets the groundwork for next year's colonies. As the mature drones emerge they leave the colony to live amongst the flowers. They forage and sleep there waiting for the new queens to arrive so they can mate to complete their life. The newly mated queens then go to ground to hibernate for the winter. In summation, what you are seeing in your garden will be queens, workers or drones, depending on the time of year.

Of the many bees we observed in the gardens, the following were most common.

The orange-banded bumble bees, were primarily represented by the Tri-colored (*B. ternarius*) Bumble

PHOTO  
THREE



**LEAFCUTTER  
(MEGACHILE SP.)  
COCOONS.**

IRIS BARRINGTON-LEIGH

Bee with a distinctive black “v” between their wings. As for the yellow and black bees, we saw a lot of the True Half-black Bees (*B. vagans*) and the aptly named Confusing or Perplexing Half-black (*B. perplexis*) Bumble Bee, which on the wing are so similar we often refer to them collectively as the Half-blacks (photos 1 & 4). We saw fewer of the larger *B. moderatus*, a robust black bee with a white tail, and the much larger yellow/black *B. nevadensis*; however, these two species were present in all our locations. (H. Hopkins, field notes, 2016)

The best time to see bees, particularly solitary bees, is midday. They are cold blooded and need the heat of the sun to warm up and get going. The flowers they forage on need sunlight to open their blossoms and make nectar. So a sunny warm day is the most productive time for bees and bee watchers. Eventually you may wish to take notes. As with bird watching, taking field-notes helps you record details which will assist you in identifying the bees at a later time. We found the book *The Bees in Your Backyard*

an excellent resource for identification.

Now that we have talked about the bees, let’s turn our attention to the flowers they pollinate. Blossoms and bees need each other; no blossoms, no bees. As lures, the flowers discussed below were winners in every way. They will guarantee that you can stay home and enjoy your garden with all its insects.

- Rocky Mountain Bee Plant (*Cleome serrulata*) is an attractive annual that blooms for



**HALF-BLACK BUMBLE BEE (*BOMBUS SP.*) ON ROCKY MOUNTAIN BEE PLANT (*CLEOME SERRULATA*).**

MORRIS LEMIRE

PHOTO  
FOUR

over seven weeks. It attracted the widest variety of bees and other pollinators, including butterflies. Cultivating this beauty is well worth it. (photo 4)

- Giant Hyssop (*Agastache foeniculum*) proved a bee magnet. Unlike most flowers it produces nectar all day long, drawing in solitary bees, scores of bumble bees and butterflies.

This hardy perennial blooms from mid July to late August. Once established, it is easy to care for, looks lovely and its leaves make a tasty tea.

- Borage (*Borago officinalis*), well known to honey producers, is a hardy late blooming annual that produces nectar generously. We saw bees on this plant from early morning to late evening.

- Chives (*Allium schoenoprasum*) are easy to grow perennials and, like other members of the onion family, they are surprisingly good attractors, covered in bees and other beneficial insects.
- Decorative Globe Thistle (*Echinops ritro*), one of our favourites, is also an insect favourite. It is hardy, non-invasive and spectacular. (photo 1)

- *Spiraea japonica*, a perennial shrub, is widely used in borders. Its umbrella shaped flower heads attract bees of all sizes. One afternoon we noticed this plant buzzing with insects including dozens of bees; we counted five different species. What a busy sight it was.

We observed well over fifty plants in the gardens we studied. Rather than list them all we encourage you to read Lori Weidenhammer, *Victory Gardens for Bees: A DIY Guide to Saving the Bees*.

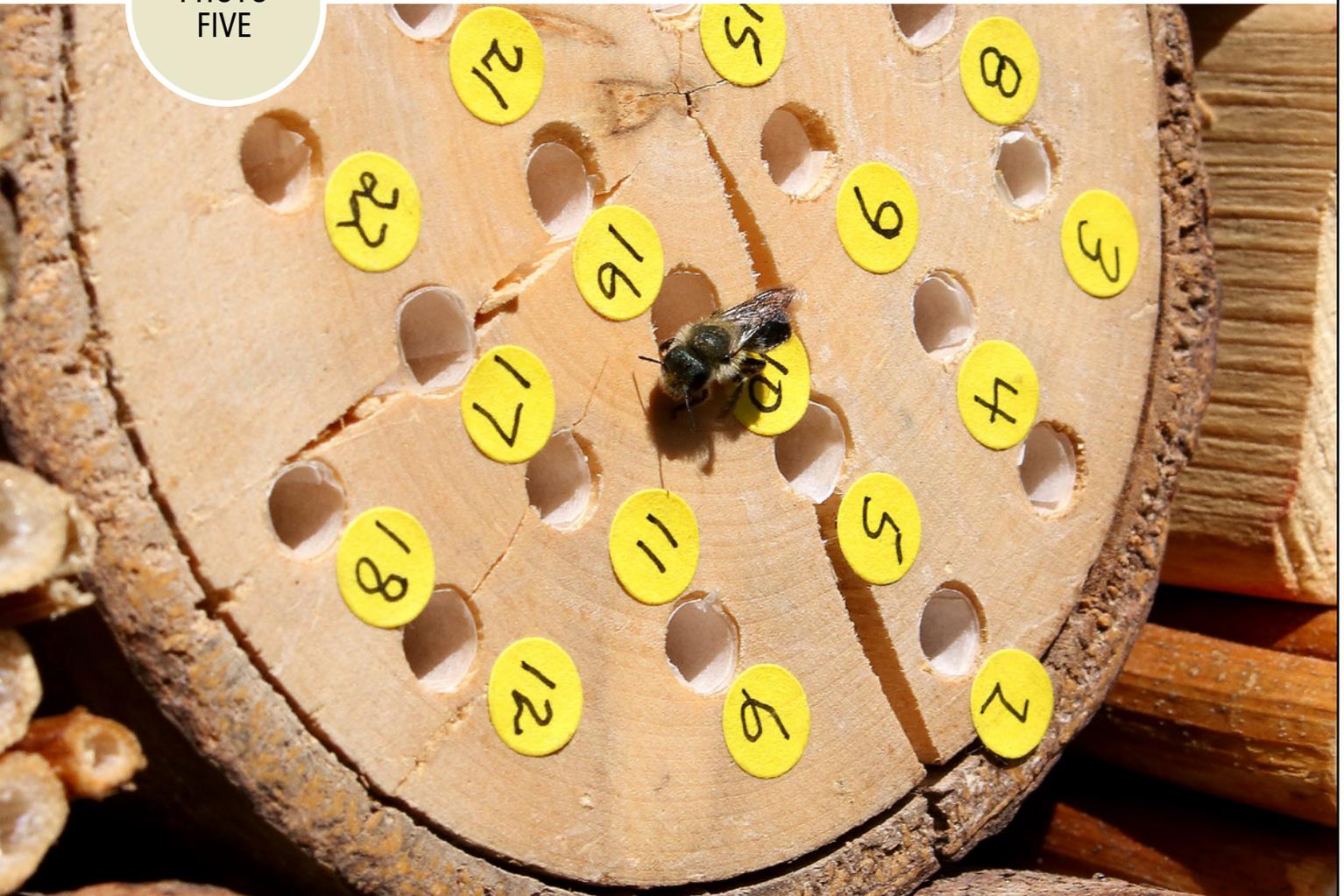
Decisions on what you plant and how you garden are critical for bee populations. A perennial garden has three major advantages: it attracts beneficial pollinators; it is a dormitory for fall drones waiting to mate; and it is a potential nesting ground. There are roughly 370 native bees in Alberta. Of these, approximately 80% are ground nesters. Because a perennial bed is not turned over, it provides undisturbed ground where these ground-nesting bees are safe from the tiller. Beyond the obvious beauty of native flowering plants, setting aside undisturbed ground

is a principal that we encourage urban gardeners to adopt.

We hope our hands-on experience, based on local gardens and local bees, offers the reader some practical ideas on planning or modifying your garden so that the bees come to you. You'll discover how wonderfully meditative sitting in your garden can be, doing absolutely nothing except watching insects. A flower garden for bees is a simple pleasure that elevates your yard to the status of refuge.

PHOTO  
FIVE

A MASON BEE (*OSMIA SP.*) ON A NESTING BLOCK. NORM HOPKINS



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# Up Close Naturally: Winter: Gearing up for Spring

BY MARGOT HERVIEUX

*It may look and feel like winter outside but a wide variety of plants and animals are already gearing up for spring.*

Conditions change daily at this time of year and there are lots of benefits to getting ahead of your neighbours.

Many plants prepare for a new growing season before the first snows of winter. The leaves of trees and shrubs are already fully formed and waiting in dormant buds, ready to swell as soon as the ground thaws and the sap begins to flow. If you gently warm a balsam poplar bud in your fingers you can actually smell the coming spring.

Bulb producing plants, including Western Wood Lily and Nodding Onion, also prepare for spring during the fall. Leaf and flower buds develop before freeze-up and the stored sugars in the bulb provide all the food necessary for an early spring start.

Lengthening days and changing light are the primary triggers for everything from sprouting and flowering

to migration and mating. If plants and animals relied on temperature as a cue they would regularly be caught by mid-winter thaws or late frosts.

Winter residents like Red Squirrels are definitely starting to respond to the changing days. Both males and females are more actively defending territories and the chasing will become even more heated as the April breeding season approaches. Visitors like Pine Grosbeaks, redpolls and waxwings will also become more restless as spring advances, and you might hear a bird testing his singing voice.

Under the snow, plants and insects are also responding to the additional light. Early spring flowers like the Crocus will be ready to bloom as soon as the snow is gone. Panes of ice also catch the sun's rays and create miniature greenhouses for ground hugging plants.

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



**SNOW FLEAS.**

On a warm, sunny day in March check the snow surface for moving black specks. A closer look will reveal tiny insects called snow fleas. Belonging to a primitive group of insects called springtails, these wingless creatures spend most of their lives in the leaf litter eating decaying plants. In the spring, however, they often end up on top of the snow eating bits of debris. Snow fleas get their name "springtails" because they have an appendage on their underside that can be flipped out to spring the insect into the air.

No matter what the winter weather, most seasonal changes tick along and spring arrives as it should. They may not always like what they find when they get here, but we can look forward to migrating Canada Geese, Crows and gulls as the month of March goes by.

**RED SQUIRRELS STAY ACTIVE ALL YEAR ROUND, FEEDING ON STORED CONES.**



# White and Blue Phase Birds in the Snow Geese Complex

BY RONALD MCELHANEY

*I was prompted to write this brief note by the interesting article, entitled “Eyes on IBAs: Flocking to Conserve” by Brook Skagen, which appeared in the Fall 2016 issue of Nature Alberta.*

More specifically, I wish to comment on the Wikipedia photograph that appeared at the top of page 15, which was supposed to illustrate the plumage differences between the white phase and blue phase of (Lesser) Snow Geese (*Chen caerulescens*).

A careful examination of this photograph will reveal that the one dark and one intermediate morph birds which appear in the foreground of this photograph are considerably smaller than the many white geese which appear in the background. This is surprising in that the blue and white phases of the Lesser Snow Goose freely interbreed and exhibit no significant differences in size.

The reason for this apparent paradox is due to the fact that the many “white phase” birds appearing in this photograph are actually Greater Snow Geese (*C. caerulescens atlanticus*) and only the two blue phase birds are actually Lesser Snow Geese. This is shown by the obviously greater size, the proportionally larger bill and “grin patches”, and the more wedge-shaped heads of

the former compared to the latter. Thus, although Wikipedia more or less correctly states that this is a photograph of a flock of Greater Snow Geese, in fact the two dark morph birds in the foreground are clearly Lesser Snow Geese which have attached themselves to a flock of their larger subspecies cousins (see below).

If this is the case, the two different subspecies of Snow Geese appearing in this photograph actually do not normally interbreed, as the caption under this photograph states, although it is of course true that the blue and white phases present in some populations of Lesser Snow Geese do more or less freely interbreed, as stated.

The occurrence or lack thereof of blue and white forms in the two Snow Geese subspecies, and indeed in different populations of Lesser Snow Geese, is complex and interesting. Although Lesser Snow Geese breed in a large and essentially contiguous area stretching from the north coast of Alaska through the Canadian high arctic to the west coast of Greenland, there are three

major wintering populations which are centered in either central California, New Mexico and central Mexico, or the south-central U.S., including the Gulf coast of Texas and Louisiana. (There is another smaller population of Lesser Snow Geese which breeds on Wrangel Island in the Russian Arctic and winters only on coastal marshes in the Vancouver, BC area. The blue phase does not occur in this population either. This fact is perhaps not surprising, as this population was likely originally derived from the westernmost Lesser Snow Goose group breeding in Alaska, in which dark morphs are also rare to non-existent.)

Interestingly, the blue morph is essentially absent from the California population, is uncommon but increasing in the New Mexico population, and is common in the Gulf coast population. Significantly for our consideration here, Lesser Snow Geese from the eastern most wintering population are uncommon but regular winter visitors to the U.S. east coast, where they often accompany flocks of Greater Snow Geese. This fact probably explains the occurrence of the two Lesser Snow Geese in conjunction with the flock of Greater Snow Geese in the Wikipedia photograph discussed above.



PHOTO FROM "EYES ON IBAS: FLOCKING TO CONSERVE", FALL 2016 ISSUE. WIKIPEDIA

In contrast, Greater Snow Geese breed in a much more restricted and spotty pattern centered on Baffin and Ellesmere Islands, including parts of the west coast of Greenland. Moreover, Greater Snow Geese migrate through central Quebec and winter on the coast of the mid-Atlantic states of the U.S. Greater Snow Geese also stage for 6-8 weeks on the St. Lawrence River estuary of southern Quebec in both their spring and fall migrations. Interestingly, migration from their southern Quebec staging area to the Chesapeake Bay area in the U.S. is accomplished in a single 900-kilometer flight. Significantly

for this article, dark morphs do not occur in Greater Snow Geese. Although older genetic studies indicate that the DNA of Lesser and Greater Snow Geese do not differ significantly enough to be considered separate species, these two subspecies do appear to be at least largely reproductively isolated and more sophisticated future genetic studies may reveal that they are emergent species.

It is interesting that a correlation seems to exist between shorter term weather patterns on their Arctic breeding grounds and the relative proportions of blue and white phase birds in the easternmost population of Lesser Snow Geese. In particular, warmer weather early in the breeding season seems to favor the preferential survival of the blue morph birds and vice versa. This had been explained

as being due to the fact that nesting blue phase birds are less conspicuous in areas largely free of snow cover, while nesting white phase birds are less conspicuous when snow remains on the ground. This may be why the proportion of dark morph birds generally increases from west to east in the Canadian Arctic, since snow cover usually disappears earlier in the eastern arctic.

If this hypothesis is true, then the global warming being experienced particularly in the Arctic should increasingly favor the survival of the blue phase as opposed to the white phase birds. Could this be the reason that the proportion of dark morphs is increasing, particularly in the population of Lesser Snow Geese wintering in New Mexico and north central Mexico? I believe that this question would make an excellent topic for future research.

# A Proposal for a Canadian National Bird Ruffles Feathers

NEW YORK TIMES, DEC 6, 2016

*Canada has a national anthem, a national tree, two national animals, two national sports — but no national bird. That would not do.*

The United States has the Bald Eagle, Mexico the Golden Eagle, France the rooster. Down in El Salvador they have the Turquoise-browed Motmot. But Canada, one of the world's major bird habitats, had gone a century and a half without ever choosing an avian avatar.

Why? The Department of Canadian Heritage, the official government keeper of symbols, could not explain it. Neither could ornithologists, nor the editor of Canadian Geographic magazine, Aaron Kylie. So the Royal Canadian Geographic Society, which publishes the magazine and perhaps saw a chance for some

nice publicity, took up the two-year task of selecting one. And boy, did it ruffle feathers.

To get the public involved, the society set up a website where Canadians could vote for their favorite bird — but it did not promise to heed the result. Instead, a panel of experts was given the final say.

Prominent Canadian writers championed their favorites in the magazine's pages, and the contest became a popular topic on (of course) Twitter under the hashtag #CanadaBird. The society even staged a public debate in September, with naturalists and Canada's poet laureate, George Elliott Clarke, each backing a species. And then came the big reveal. The proposed Canadian national bird would be...the Gray Jay.

### THE WHAT?

It's a fluffy songbird found in all 13 of Canada's provinces and territories, which is a plus. But it tends to stick to the deep northern woods, and isn't often seen as far south as the strip of land along the American border where most Canadians live. To them, the Gray Jay is a stranger.

David Bird, a professor emeritus of wildlife biology and an ornithologist at McGill University in Montreal, was the bird's booster in the debate. In an interview, Professor Bird gave a long list of reasons. For example, he said that instead of migrating, the Gray Jay stays in Canada and nests through the winter, feeding on frozen food that it stashed away in the fall under the loose bark of spruce trees. Mating pairs are monogamous, he said, unlike many other species. And Gray Jays like people when they meet them, alighting on their clothing or hands in the hope of a snack. "You've got loyal, you've got friendly, you've got smart, you've got hearty: That's what Canadians think we are," Professor Bird said.

But what you haven't got is huge popularity. When about 50,000 people voted in the magazine's online poll, the Gray Jay finished third, behind the Loon and the Snowy Owl. Mr. Kylie, the editor of Canadian Geographic, said that the Loon and Snowy Owl were excluded from final consideration because they were already used as symbols by the provinces of Ontario and Quebec.

He said the relative unfamiliarity of the Gray Jay, also known as the "whiskey jack," weighed on the plus side, not the minus. "We have an animal symbol, which is the Beaver," he said by way of analogy. "I would say that most Canadians don't see a beaver in a given year. The fact that some Canadians don't know this bird, I think, is all the more reason to have it proclaimed the national bird."

Then you have the spelling of the bird's names. Following the usual Canadian style, it ought to be called the grey jay, with an e, or the whisky jack, without one. The "gray" and "whiskey" spellings are seen (and resented) as Americanisms. The issue particularly vexes Dan Strickland, who began researching the bird as a graduate student at the Université de Montréal in late 1960s and continues to do so even after retiring as chief naturalist at Algonquin Provincial Park in Ontario.

The spellings, he said, come from the American Ornithologists' Union, which took it upon itself to determine official names for all the birds in North America. The union gave the species the Latin name *Perisoreus canadensis*, and at first, from 1886 to 1910, referred



to it in English as the Canada Jay. The union dropped all English bird names in 1910, but brought them back later, and the current ones stem from a sweeping revision of its naming system in 1957.

Mr. Strickland, whose license plate reads GRAY JA Y, said that if the government did adopt the bird as a symbol, it ought to legislate a Canadian name for it. "The bird is obviously a viable, valid contender to be the national bird," Mr. Strickland said. "But it is entirely inappropriate for the Canadian national bird to have a name imposed by a self-appointed foreign body. The A.O.U. can fall into line for once, or do whatever they want. But they do not get to name our national symbols."

However you spell it, the magazine's proposal has met with a cool reception from officialdom. "At this time, the government of Canada is not actively considering proposals to adopt a bird as a national symbol," Pierre-Olivier Herbert, the press secretary for Mélanie Joly, the heritage minister, wrote in an email.

Even so, Professor Bird is among those now pushing to get a Gray Jay bill through Parliament somehow. And he expressed relief that another bird associated with Canada was never a real contender. "Canada Goose? Over my dead body," he said. "They're basically pooping machines, and they're obnoxious. If we had picked that bird, we would be getting a lot more outrage than we have now."

## CELESTIAL HAPPENINGS

# Starry Nights

## Spring: March to May

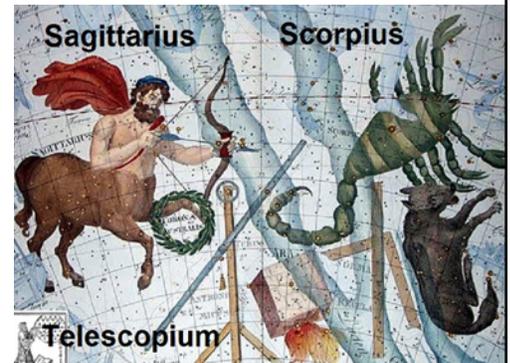
BY JOHN MCFAUL

### FEATURED CONSTELLATIONS: PYXIS, PICTOR AND TELESCOPIUM

In 1750 the French astronomer Abbé Nicolas Louis de La Caille arrived in South Africa where he wished to determine various astronomical calculations. One result of his work was the cataloging of 10,000 stars. While doing so he created 14 constellations that are still part of the pantheon of the 88 official constellations that are recognized by the International Astronomical Union. Three of these include Pyxis, Pictor and Telescopium. Pyxis (The Compass) symbolizes the magnetic compass used by seafarers of the day. This was in keeping with La Caille's wish to commemorate various instruments in use to promote the advancement of science and exploration. Before his time it was depicted as part of the mast of the mythical Greek ship Argos which carried the infamous Jason and the Argonauts in search of the Golden Fleece. Since the initial designation of the constellation Argos Navis it was broken up into separate constellations including Pyxis. Pyxis is visible from southern Alberta during the months of February and March low in the southern sky south-east of Canis Major and its bright star Sirius, although it is quite small and faint. Pictor (The Painter) was first designated as: Le Chevalet et la Palette (the easel and palette) by La Caille. It is noted as having a number of stars that have planetary

systems including at least one star that is orbited by a super-earth located in the habitable zone where liquid water can exist on the surface. This is a zone where life as we know it could exist.

Telescopium's (The Telescope) northern boundary once extended up between Sagittarius and Scorpius and would have been visible from Alberta. It was shortened up and now lies 10 degrees further south and is thus not visible from Alberta. Of note a gamma-ray burst was detected in the direction of Telescopium in 1998. It occurred



from a galaxy 100 million light years from earth. Such a burst releases the equivalent amount of energy in a few seconds that the Sun will produce over its 10 billion year lifetime.

### CELESTIAL HAPPENINGS

**Sun:** Rise – March 1 (7:21 MST), April 1 (7:06 MDT), May 1 (5:58 MDT)  
Set – March 1 (18:12 MST), April 1 (20:10 MDT), May 1 (21:05 MDT)  
NOTE: Day Light Savings Time will start on Sunday, March 12th.  
Spring Equinox is on Saturday, March 20th, 2017 at 4:29 AM.

**Moon:** Full – March 12, April 11, May 10  
New – March 27, April 26, May 25

**Planets:** **Mercury** will be best seen low in the west shortly after sunset from about March 23rd to April 8th. The thin crescent moon will be 10 degrees NE of Mercury on March 29th.

**Venus** will continue to shine brightly in the evening SW sky until the middle of March when it will be lost in the solar glare. On March 25th it passes 8 degrees above the Sun and moves into the early morning sky to be seen low in the east from April 3rd to the end of May.

**Mars** can be seen in the early evening sky above the western horizon throughout the spring. On March 24th it will be near (in conjunction with) the crescent moon. On April 24th look for the red planet near the Pleiades star cluster.

**Jupiter** is in the constellation Virgo near the bright star Spica and rises in the east in the late evening during March. At this time it is best seen high in the southern sky in the morning. It rises 2 hours earlier each month. From the middle of April to the end of May look for it in the late evening southern sky.

**Saturn** is in the constellation Sagittarius and is best seen in the southern sky about 15 degrees above the horizon an hour before sunrise.

**Meteor Shower:** Lyrids (April 21, 15/hour in a dark sky), Eta Aquirids (May 4th, 20/hour).  
*The rate of meteors observed is for dark skies well away from city lights and with no Moon.*

# eBird 2016: Canadian Highlights

2017 will mark the 15-year anniversary of eBird. In just a decade-and-a-half, the bird checklists that you have shared have helped make eBird the largest citizen science biodiversity project in the world. More than 1/3 million eBirders have submitted 370 million bird sightings, representing 10,313 species from every country in the world.

We are continually humbled by the amazing power and passion of the birding community, and have nothing but excitement as we look to the future of what we can do together. As we compile this list of eBird's achievements in 2016, we are reminded that these

are all truly **your** achievements. It is your contributions that power this knowledge engine. Every time you go out and keep a list of birds you see, you're making a real contribution to our understanding of the world's ever-changing avian biodiversity.

2016 was a great year for eBird Canada. Canadians from coast to coast observed an impressive 513 species, approximately 74 percent of the 691 species on the Canadian checklist. Six new species were added to the Canadian eBird database this year. Newfoundland and Labrador hosted two of these new records: a Common Swift seen in July, and a Kelp Gull seen in December. An

incredible

(and very out

of range) first Canadian record for Amethyst-throated Hummingbird, was also added to eBird from Saguenay Quebec. Ontario hosted the country's first Grace's Warbler in May, and British Columbia was the site of the 2nd (and 3rd!) known Lucy's Warblers for the country, with two separate records in May and September. (The first known Canadian sighting of this species from Alberta in 2008 has not yet made the eBird Canada database.) British Columbia was also responsible for Canada (and the ABA's) first record of White-cheeked Starling with an individual found in Tofino in April.



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# Nature *gallery*



**A COYOTE FEEDER?? SEE "ON THE COVERS" PAGE 3.** LU CARBYN



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