

# 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



**THE KANANASKIS RIVER, WITH MOUNT LORETTE. SEE THE FEATURE STORY (PAGE 24).**  
GEORGE HALMAZNA

*feature article*

## FLOOD – The Other “F” Word?



**UP 'N OVER! SEE STORY PG 8.** D. SIMON JACKSON



**RED-NECKED GREBE WITH A CHICK; SEE STORY PG 43.**  
SANDRA HAWKINS

*Nature Alberta:  
Celebrating our natural heritage*

# Contents

NATURE ALBERTA VOLUME 44, NUMBER 2, SUMMER 2014

Editor's Page BY DENNIS BARESCO .....	2
Alberta Issues in Brief.....	5
Why walk around the pond when you can jump over it? BY D. SIMON JACKSON .....	8
Nature Alberta News .....	11
Nature Diary: Firsts on Life List! BY DEBBIE AND ALAN GODKIN .....	13
Close to Home: Nature Photography in Alberta BY JOHN WARDEN .....	14
Eyes on IBAs: Pakowki Lake IBA visit, and my first White-faced Ibis sighting! BY BROOK SKAGEN .....	19
The American (or Pine) Marten BY MICHAEL PATRICK MARKLEVITZ .....	21
FEATURE ARTICLE: FLOOD - The Other "F" Word? BY LORNE FITCH.....	24
First Hand .....	29
The Changes in House Wren Reproductive Success in 24 Years BY SARA FRISKE AND AMÉLIE ROBERTO-CHARRON.....	31
Black-billed Cuckoo Update BY TED HINDMARCH .....	35
Using Technology to Track Purple Martins BY MYRNA PEARMAN .....	36
Amelia's Story BY MYRNA PEARMAN.....	39
Owen Slater's Pine Marten BY OWEN SLATER.....	40
Up Close Naturally: Parasitic Wasps BY MARGOT HERVIEUX.....	41
Book Review: Alberta Species at Risk booklet released.....	42
Wildlife! Starring... The Red-necked Grebe ( <i>Podiceps grisegena</i> ) BY SANDRA HAWKINS .....	43
Celestial Happenings BY JOHN MCFAUL .....	46
Young Naturalists Club Page.....	47

PUBLISHED QUARTERLY BY NATURE ALBERTA,  
11759 GROAT ROAD, EDMONTON, AB T5M 3K6  
PHONE.780.427.8124 FAX.780.422.2663  
EMAIL.na@naturealberta.ca

EDITOR.DENNIS BARESCO  
EMAIL.na@naturealberta.ca  
CIRCULATION.TED HINDMARCH  
LAYOUT.BROKEN ARROW SOLUTIONS INC.

THANKS TO THE PROOFREADERS WHO ASSISTED IN PRODUCING THIS ISSUE:  
SANDRA FOSS, ELAINE GERMYN, SUZANNE LORINCZI, VAL SCHOLEFIELD,  
JUNE VERMEULEN.

MANY THANKS TO THIS ISSUE'S CONTRIBUTORS

#### WANT TO SUBMIT ARTICLES OR PHOTOS?

GUIDELINES ARE AVAILABLE ON  
THE NATURE ALBERTA WEBSITE:  
WWW.NATUREALBERTA.CA

#### NATURE ALBERTA DEADLINES ARE:

SPRING ISSUE.FEBRUARY 28  
SUMMER ISSUE.MAY 31  
FALL ISSUE.AUGUST 31  
WINTER ISSUE.NOVEMBER 30

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.

#### BOARD OF DIRECTORS

PRESIDENT: Ted Hindmarch

VICE PRESIDENT: Linda Howitt-Taylor

SECRETARY: Claudia Lipski

TREASURER: Christine Brown

PAST PRESIDENT: Chuck Priestley

APPOINTED DIRECTORS: Christine Brown, Ted Hindmarch, Joseph Hnatiuk,  
Geoff Holroyd, Chuck Priestley, Linda Howitt-Taylor

ELECTED DIRECTORS: Jennine Pedersen (ANPC); Claudia Lipski, (BLN);

John & Linda Stewart (CFNS); Lu Carbyn, (ENC); Martha Munz-Gue, (GN);

Jennifer Okrainec (LLBBS); Lloyd Bennett (LNS); Margot Hevieux (PPN);

Tony Blake (RDRN); Chris Olsen (VRNS);

STAFF: Petra Rowell (Exec. Dir.)

#### CORPORATE MEMBER CLUBS

Alberta Native Plant Council, Box 52099, Garneau P.O. Edmonton, AB  
T6G 2T5

Buffalo Lake Naturalists, Box 1802, Stettler, AB T0C 2L0

Nature Calgary (CFNS), Box 981, Calgary, AB T2P 2K4

Edmonton Nature Club, Box 1111, Edmonton, AB T5J 2M1

Grasslands Naturalists, Box 2491, Medicine Hat, AB T1A 8G8

Lac La Biche Birding Society, Box 1270, Lac La Biche, AB T0A 2C0

Lethbridge Naturalists Society, Box 1691, Lethbridge, AB T1J 4K4

Peace Parkland Naturalists, Box 1451, Grande Prairie, AB T8V 4Z2

Red Deer River Naturalists, Box 785, Red Deer, AB T4N 5H2

Vermilion River Naturalists, 5707 - 47 Avenue, Vermilion, AB T9X 1K5

#### AFFILIATES:

Alberta Lake Management Society

Alberta Lepidopterists' Guild

Alberta Mycological Society

Beaverhill Bird Observatory

Beaver River Naturalist Club

Big Lake Environmental Support Society

BowKan Birders

Calgary Bird Banding Society

Cochrane Environmental Action

Committee

Crooked Creek Conservancy Society

Crowsnest Conservation Society

Edmonton Naturalization Group

Ellis Bird Farm

Fort Saskatchewan Naturalist Society

Friends of Blackfoot Society

Friends of Elk Island Society

Friends of Jasper National Park

Friends of Little Beaver Lake Society

Grant MacEwan Mountain Club

Heritage Tree Foundation of Canada

J.J. Collett Natural Area Foundation

Lesser Slave Lake Bird Observatory

Little Creeks and Rough Fescue

Appreciation Society

Purple Martin Conservancy

Riverlot 56 Natural Area Society

Stewards of Alberta's Protected Areas

Association

The Wagner Natural Area Society

Weaselhead/Glenmore Park

Preservation Society

Wizard Lake Watershed and Lake

Stewardship Assoc.

#### CELEBRATE NATURE ALBERTA

SERVING NATURE FOR OVER 43 YEARS!!!



#### EDITORIAL DISCLAIMER

The opinions expressed by the authors in this publication do not necessarily reflect those of the editor and the Federation of Alberta Naturalists. The editor reserves the right to edit, reject or withdraw articles submitted. While due care will be taken of all manuscripts, photos or artwork submitted, FAN cannot be held responsible for any loss or damage to such articles.

# Editor's Page

BY DENNIS BARESCO

## POOR LITTLE ROBIN!

Not just robins, but almost any bird you can think of, along with deer, rabbits and who knows what else. Yes, summer is the time of year when nature and wildlife rescue centres are inundated with well-meaning folks bringing in fledglings, fawns and other baby animals that were “abandoned.” In almost all cases, though, they weren't abandoned at all.

Fledglings leave the nest, never to return, before they can actually fly with any confidence, scattering while the parents go to and fro trying to feed them. Deer leave their fawns for hours, satisfied that the little, virtually scentless creature will lie perfectly still and thus safe, even in plain view. Meanwhile, nature interpreters and the media (eg., a June 14th article by Andrea Ross in the Edmonton Journal) consistently inform the public NOT to try to save a creature just because, to us, it appears to need saving. The public concern and sympathy for the babies is admirable and understandable, for sure; but it does go to show that there's still a lot of education to be done.

I roll my eyes whenever I see a photo in the paper of a pair of Canada Geese with 15 to 25 goslings, and the write-up is often about what a huge family the pair has. For the media, it's a perfect opportunity to provide

some knowledge – as well as a novel and far more interesting angle – for their readers; if only they'd ask a naturalist or Google it, they'd learn that Canada Geese often babysit other broods while the parents are off feeding. Apparently though, and perhaps not surprisingly, the babysitting pair of adults ensures that their own goslings get the most attention and protection.

## CORRECTIONS

In the previous edition of *Nature Alberta* (Spring 2014), a couple of errors were in the article, “Bull Trout,” by Courtney Neal (pg 42). A statement on fly fishing was missing four words; it should have been: “It's unusual to catch one on a fly rod with a dry fly” – the words “with a dry fly” having been deleted somehow. Courtney also stated that the catch-and-release open season starts July 16th; he later realized it should have been June 16th.

Another mistake is quite understandable, considering few people are aware of it. In his article, Courtney mentions “the barbless hook legislation of 2004.” Apparently, using barbless hooks is now just voluntary. The federal government removed the barbless hook ban in Sept 2011 but for whatever reason did not inform Alberta. Thus, Alberta has had to withdraw charges and

reverse any convictions and fines for those affected since that time. While Alberta can't enforce the now defunct legislation, fishers are encouraged to voluntarily use barbless hooks. It seems the province would like to reinstate the ban, but that might be a very complicated process which requires cooperation from the feds, who removed the ban in the first place.

## PAKOWKI AND WESTERN GREBES

An article in the “Alberta Issues in Brief” section, page 5, talks about the new listing of Western Grebes. And the IBA article, page 19, relates Brook Skagen's experience at Pakowki Lake. That lake is a fabulous bird sanctuary. Tom Bateman of Lethbridge wrote on social media: “I recently (May 2014) led a tour group to Pakowki Lake and we found several Western Grebes just on the western arm of the lake. Probably four dozen or so. Also 20 White-faced Ibis. The lake is higher than I have seen it in the last 50 years.”

The word “Pakowki” is Blackfoot for “bad water”; I much prefer the name Pakowki Lake to Bad Water Lake!

## MORE ON MURMURATIONS

As I'd said in my Spring column, the science behind murmurations is truly fascinating. Dick Dekker, the well-known Alberta scientist, researcher, ecologist and writer, recently responded to the segment “Murmurations,” (Editor's Page,

EDITOR'S PAGE cont'd...

*Nature Alberta* Spring 2014) with further observations and information. Said Dick:

*Having studied the anti-predator strategies of open-country birds such as starlings, I need to better explain the phenomenon of the so-called murmurations*

*In this usage, the term murmuration of starlings is actually a misnomer. The term murmuration applies to the chorus of starlings in late winter and early spring, when breeding starlings hold a communal singsong in their pleasant murmur of chirps and whistles. The spectacular flight concentrations now called murmurations are expressions of before-roosting restlessness and the aerial, anti-predator defenses common to open-country birds, including shorebirds and starlings.*

*As a young naturalist in The Netherlands, half a century ago, I was drawn to the roosting congregations of starlings around sundown and dusk, to see raptors. These places are traditional, or used for the duration of a season, night after night, and attract the attention of a growing number of avian predators. All the huge flocks of starlings gyrating in the sky want to do is to land and go to sleep in the reeds or bushes. But they are fearful, because hawks, falcons, and owls of all stripes are waiting in the cover of reeds and bushes, ready to launch a surprise attack. Peregrines will follow-chase the starlings up into the*

## On the Covers:



### FRONT COVER

George Halmazna's delightful photo shows the clear Kananaskis River in a gentler, more natural flow. Floods, at least major ones, create horrific problems for people. But problems are much less for nature and in many cases are positive to varying degrees. However, human infrastructure and activity very often increases the severity of the flood on the natural environment. See the Feature Story, page 24.



### INSIDE FRONT COVER

Simon Jackson asks the question: "So what happens when a scary small pond poses a small inconvenience?" Well, Simon has the answer in his humorous tale, "Why walk around the pond when you can jump over it?" on page 8. Plus he has the photographic

images to prove it!

The Grebe family is a fascinating group of water birds, especially the Western and Clark's Grebes and the subject of this edition's "Wildlife Starring" segment, the Red-necked Grebe, starting on page 43. Sandra Hawkins captured some amazing images to illustrate her story, including this one of an adult with wings raised and a chick, with its rather dorky-looking (but cute!) facial markings.



### INSIDE BACK COVER

Purple Martins are one of the many enthralling sights at the Ellis Bird Farm, a site that everyone should visit at least once in their lifetime. This female, at its gourd-shaped nest, was captured in a particularly interesting pose. See the story, page 36.

Another great Living by Water project: tree planting as part of Edmonton's annual Root for Trees Fest. See the story, page 11.

John Warden calls this photo "Majesty." It is easy to see why: bison silhouetted by the sunlight highlighting the wild clouds above the prairie. The light, as John says in his column (page 14) "calls to me and grabs my attention, showcasing the beautiful."



### BACK COVER

Pine Martens, or American Martens as they are also called, may be curious Mustelids, but that doesn't mean they are easy to photograph in the wild. As Michael Patrick Marklevitz says in his article on page 21: "The best chance to get good looks at a marten are often the semi-habituated individuals that come around cabins or bird feeders." However, Owen Slater got Pine-Marten-lucky with

this photo, taken around 10am on Nov. 14, 2013 in Banff National Park. See Owen's story, page 40. Check out his website, too: [owenslaterphotography.com](http://owenslaterphotography.com)

**Want to Switch?**

Switch your subscription from hard copy to the full COLOUR e-version and get even GREATER enjoyment of *Nature Alberta* while REDUCING paper use.

Phone today: (780) 427.8124; or

Email us: [na@naturealberta.ca](mailto:na@naturealberta.ca) or [wildhvn@memlane.com](mailto:wildhvn@memlane.com)

*sky, adding to the pandemonium. With the phenomenal increase in Peregrine Falcons all over the world, the roosting flights of starlings have become ever more prominent.*

—Dick Dekker

#### WHAT HAPPENED TO RYAN?

You may have noticed that Ryan Heavy Head's column has been absent for the last few editions of *Nature Alberta*. According to Ryan, his writing muse has left him for a while. His video muse, however, is very active. Check out "Feeding the Coyote Pups" and his other videos on YouTube.

#### OIL SPILLS = GREAT OPPORTUNITIES!

This is not a spoof, nor is it from "Ripley's Believe It or Not". It is an actual excerpt from Kinder Morgan's submission to the National Energy Board (NEB) to approve tripling the capacity of their Trans Mountain Pipeline. No editorial comment required!

*"Spill response and clean-up creates business and employment opportunities for affected communities, regions, and clean-up service providers, particularly in those communities where spill response equipment is, or would be, staged."*

—Section 5.6.1.1, Page 6A-615.

# Discover our Natural World



Panther  
Chameleon

## COMING UP:

TANZANIA SAFARI: WILDLIFE SPECTACULAR [ Feb 2015 ]

AMAZON RAINFOREST OF BRAZIL: CRUISING THE RIO NEGRO [ FEB 2015 ]

**MADAGASCAR: LEMURS, ENDEMIC BIRDS AND CHAMELEONS [ SEPT 2015 ]**

TRINIDAD AND TOBAGO: RELAXED INTRO TO TROPICAL BIRDING [ FEB 2015 ]

**Request a detailed itinerary today**

travel@worldwidequest.com | 1-800-387-1483



NATURE TOURS

www.QuestNatureTours.com

## ALBERTA ISSUES IN BRIEF

## Dancing Western Grebes

INFORMATION FROM A UNIVERSITY OF ALBERTA NEWSLETTER ARTICLE BY BEV BETKOWSKI (JUNE 18, 2014) AND AN EMAIL FROM MARK BOYCE.

Western Grebes do a courtship dance that is one of Alberta's truly amazing wildlife spectacles. If you've ever seen it in person, you will know exactly what we mean. If you haven't, then check out the YouTube video: [www.youtube.com/watch?v=ZbRrxw-H6xA](http://www.youtube.com/watch?v=ZbRrxw-H6xA).

In May, Western Grebe (*Aechmophorus occidentalis*) was formally given Threatened Status by the Alberta Government under the Alberta Wildlife Act. The species prefers lakes that are deep, large and fish-filled – the same habitat that is often a summer haven for vacationers and recreationists.

However, a co-authored study by University of Alberta researchers Mara Erickson and Professor Mark Boyce shows that Western Grebes and humans can be lakeshore neighbours: “The birds will do fine on developed lakes so long as people respect the critical habitat,” noted Boyce. “Cottage owners and developers should take care to minimize disturbance near Western Grebe colonies, especially in June, to avoid disturbing nesting birds.”

Since 1970, the Western Grebe has disappeared from almost half of the Alberta lakes it used to inhabit. “There is the risk of

losing brood-rearing habitats if steps aren't taken to prevent disturbances caused by clearing of crucial shoreline vegetation like bulrushes,” noted Mara Erickson, adding that “including wave-free buffer zones in conservation management strategies is also a way to minimize disturbance to reed beds needed by the birds to nest and raise their young.”

Western Grebes, with their elegant features and red eyes, are found only in North America. The study, which was supported by the Alberta Conservation Association, the Natural Sciences and Engineering Research Council of Canada, the North American Waterfowl Management Plan



**THE MATING DANCE!** BRIAN CURRIE/WIKI COMMONS

and the Alberta Sport, Recreation, Parks and Wildlife Foundation was conducted by Mara Erickson for her master's thesis.

See more at: <http://uofa.ualberta.ca/news-and-events/newsarticles/2014/june/limiting-lake-development-key-to-preserving-water-birds#sthash.fATynAgc.dpuf>



**A PAIR OF WESTERN GREBES.**

ALAN AND ELAINE WILSON/WIKI COMMONS

## It's Not Just Bees!

FROM MEDIA BRIEFING NOTES, WIA; JUNE 22, 2014, AND MEDIA SOURCES

The findings of the Worldwide Integrated Assessment (WIA) undertaken by the Task Force on Systemic Pesticides make it absolutely clear neonicotinoid pesticides must be banned worldwide, including by Health Canada. The study reviewed some 800 scientific papers and concluded that the impacts of neonicotinoid pesticides go far beyond honey bees; butterflies, birds, amphibians and many aquatic and terrestrial invertebrates are all threatened. The findings will be published in the peer reviewed *Journal Environmental Science and Pollution Research* in Summer 2014.

Concern about the impact of systemic pesticides on a variety of beneficial species has been growing over the last 20 years. While attention has mainly focused on the economically important honey bee, scientists and others have also registered growing alarm about the decline in many other insect species. In the case of acute effects alone, some neonics are at least 5,000

to 10,000 times more toxic to bees than DDT.

Last September, Health Canada's Pest Management Regulatory Agency (PMRA) concluded that the use of neonicotinoid pesticides is unsustainable because of the damaging effects on bees; PMRA was very clear about that. But, after a three month comment period, the Agency decided last December to continue consulting for at least two more years before making a decision. Then, in February of this year, PMRA apparently greatly expanded the approved uses of the neonicotinoid pesticides despite its own cautions and mounting evidence of the damage being done.

The European Union banned, or placed a moratorium on,



BEFOREITSNEWS.COM, MAY 20, 2014

some uses of neonicotinoid pesticides a year ago in response to mounting scientific evidence. In mid-June 2014, United States President Barack Obama announced a review of pesticides among other measures to protect bees and other pollinators.

Representatives of manufacturers say that there is nothing new in the task force study and deny that these pesticides harm bees. In a BBC News article (June 23, 2014), Dr Julian Little from Bayer, one of the manufacturers of neonicotinoids, said: "There is very little credible evidence that these things are causing untoward damage because we would have seen them over 20 years of use."



Ontario has started work on restricting the use of neonicotinoid pesticides, the first province to do so. The province hopes to have a licensing system set up by fall 2014. However, it faces considerable pushback from both farmers who use the pesticide and from the pesticide industry.

## Northern Gateway Approved, 300 Scientists say JRP Report “deeply flawed” and “biased”

INFORMATION FROM VANCOUVEROBSERVER.COM ARTICLE, JUNE 3RD, 2014

To no one's surprise, the Harper Government recently approved the Northern Gateway pipeline to move tar sands bitumen through Alberta and British Columbia to the west coast for export to Asia. The Joint Review Panel's (JRP) recommendation to proceed was touted as a major justification for the government decision.

However, prior to the approval, on May 23rd, an open letter was sent to Mr. Harper from 300 top Canadian, American and international scientists asking him to reject the JRP's report, pointing out that it was “deeply flawed” and “biased.”

“A lot of science that people assume is critical to the decision,

is either being excluded or being considered in a highly flawed or biased way,” said Dr. Kai Chan in the Vancouver Observer article; Dr. Chan is associate professor with UBC's Institute for Resources, Environment and Sustainability, and a Canada Research Chair.

Some of the flaws cited in the scientists' letter were that: the report failed to adequately articulate the rationale for its findings; the analysis was a very broad take on the benefits, and a very narrow take on the costs; it relied on information from the proponent, without external evaluation; it contradicted scientific evidence contained in official government documents; it treated uncertain

risks as unimportant risks, and assumed these would be negated by the proponent's yet-to-be-developed mitigation measures; climate change was not a consideration in the JRP's review of the pipeline; not only does the review contradict the government's recovery plans and management of species at risk, but it does not even speak to these species.

The scientists pointed out that they were not taking a stand one way or another on Northern Gateway; they were simply pointing out that the scientific basis for the decision of the JRP was badly flawed.

Nevertheless, Natural Resources Minister Greg Rickford said after the approval that the report was a “rigorous, comprehensive, science-based examination.”

## Protecting Half of the Boreal for Billions of Birds

A new scientific report, “Conserving the World's Last Great Forest Is Possible: Here's How,” takes a closer look at North America's Boreal Forests and what we can do to preserve the hundreds of species that rely on this vast, mostly-intact forest.

At least half of the boreal forest should be protected from industrial development to provide birds the best fighting chance of surviving the dual threats of habitat loss and climate change. This continues the ever-growing research concluding that larger, interconnected protected areas are necessary in order to maintain our planet's amazing collection of biodiversity.

The North American Boreal Forest has been dubbed “North America's Bird Nursery” due to its impressive role in supporting migratory birds. The statistics are astonishing:

- Between 1-3 billion birds representing more than 300 species flock to the boreal each spring to find summer nesting habitat.
- Once the young have hatched, 3-5 billion birds migrate back south toward their winter habitat – many as close as the U.S. and some as far south as the Tierra del Fuego.

- More than 1 billion of these birds become common wintering birds that can be found throughout the U.S.

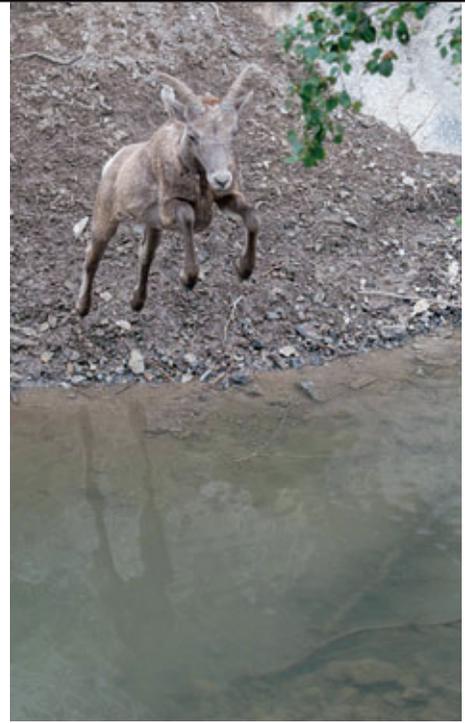
The report, which includes a section on Alberta's Wood Buffalo National Park, Canada's largest protected area, was issued under the auspices of the International Boreal Conservation Science Panel.

### COMMITTED!

As the voice for boreal birds, the Boreal Songbird Initiative (BSI) is committed to protecting the Canadian Boreal Forest – the largest intact forest on Earth – on behalf of the billions of migratory birds that rely on it. [www.borealbirds.org](http://www.borealbirds.org).

# Why walk around the pond when you can jump over it?

BY D. SIMON JACKSON



*Bighorn Sheep (Ovis canadensis) hate walking through water. Hate it. Almost as much as they hate the inconvenience of walking around water. So what happens when a scary small pond poses a small inconvenience?*

Like House of Pain, they jump. This is the bizarro-world story about a herd of Bighorn Sheep in Jasper National Park. First, some context.

I have a tendency of spending an extraordinary amount of time waiting for lightning to strike twice. Such was the case with a small pull-off on Highway 16 just east of Jasper, near Roche Miette, where Jill (and my family and our friends) have humoured me by waiting patiently for a Cougar to reappear after we spotted it in this location three years ago. The good news for those I love is that

this pull-off is a great location to pass the time watching the oddest of odd herds of Bighorn Sheep.

Like many sheep, they (depressingly) enjoy overdosing on car-produced sodium and will make the daily pilgrimage from their grassy, sublime (when Cougars and Wolves aren't hunting them) hillside habitat to the highway below. Only one mortal danger – in their eyes – stands in the way: a small pond.

While the Mountain Goats that share this home and taste for salt always just walk around the pond

– like any right-thinking animal would – the sheep seem to view the long route with venomous distaste. But swimming across the pond is a non-starter as well. So once a day, most days, this peculiar group of sheep stare at the water for about 15 minutes to give themselves the prerequisite pep talk for the inevitable jump across the pond.

I remember when I first saw a Bighorn jump across the pond that I'd just witnessed a once-in-a-lifetime moment that would never be repeated again. I thought that

*D. Simon Jackson is a Speaker, Strategist, Writer & Photographer who, for two decades, helped run the campaign to protect the spirit bear on Canada's west coast. Having recently closed down his organization (spiritbearyouth.org), he decided to co-launch GhostBearPhotography.com which, like the spirit bear campaign itself, hopes to reconnect people with the wild and through photography, help the world fall in love with nature again.*

*It is very worthwhile to check out his interesting websites: [ghostbearphotography.com](http://ghostbearphotography.com), and [dsimonjackson.com](http://dsimonjackson.com). You can also friend Simon's "Ghost Bear Photography" Facebook page.*



**A LEAP AND A HOPE!** D. SIMON JACKSON

for about five seconds. Then the next sheep jumped.

And then I frantically grabbed my camera and started shooting. Because the whole herd was lined up and – some more than others – ready to take the plunge... er, jump. But plunge many of them did. Some Bighorn – lambs especially – just couldn't clear the pond and would curse gravity as it forced their bodies into the dreaded water.

As soon as each sheep made it across – with or without touching the water – you could see they were torn between loving the idea that they survived their nemesis for another day and being completely freaked out by their brush with water.

Again, because they couldn't walk around the pond. That's only

something a goat would do. So what happens when the Bighorn complete their time at the man-made salt lick?

Well, with the raw emotions of jumping across the pond just too fresh in their minds, the sheep walk down the highway and cross under the nearby river bridge in order to return to their grassy knoll. (Yes, I see the irony that walking around the pond is too much of an inconvenience for the sheep, but walking a kilometre out of their way to go underneath a highway isn't.)

There is one exception to this rule, I've learned.

The rams – who clearly have... um...rammed their heads together a few too many times during the rut – choose to first cross the river and then go under the highway on the far side of the bridge. And according to some, this is with good reason.

Supposedly, Bighorn also hate narrow passageways. And unless you cross the river, the passage under the highway is very, very narrow. As such, the rams will, in proper line formation, alternate



**INTO THE DREADED WATER!**

D. SIMON JACKSON

between running, bucking and jumping their way across the shallow river like a deranged rodeo in a magma flow.

Again and again and again.

So to recap: narrow passages trump water, which trumps inconvenience, which trumps narrow passages on the scale of Bighorn Sheep fears. It's like an elaborate game of rock-paper-scissors, except it's a daily ritual and losing appears to be a fate worse than death.

And if you think this is a one-time wonder, I can assure you we've now witnessed this every time we've waited for Cougars. Which is every year, for three years. Mountain Goats, with their crankiness and climbing adventures, have never looked so normal.

**"...RUNNING, BUCKING AND JUMPING  
ACROSS THE SHALLOW RIVER..."**

D. SIMON JACKSON



## Ponderables

FROM WADE DAVIS, TALKING ABOUT THE EFFECTS OF CLIMATE CHANGE AND MELTING GLACIERS THAT PROVIDE WATER TO THE WORLD:

"We have for three centuries now, as Thom Hartmann has written, consumed the ancient sunlight of the world. Our economic models are projections and arrows when they should be circles. To define perpetual growth on a finite planet as the sole measure of economic well-being is to engage in a form of slow collective suicide. To deny or exclude from the calculus of governance and economy the costs of violating the biological support systems of life is the logic of delusion."

WADE DAVIS

*"The Wayfinders: Why ancient wisdom matters in the modern world."* House of Anansi Press, CBC Massey Lectures. (ISBN 978-0-88784-842-1)

# Nature Alberta NEWS



## Living by Water Receives Grant from Royal Bank

On June 14th, Nature Alberta's Living by Water project received a grant from the Royal Bank of Canada (RBC) at the City of Edmonton's "Root for Trees Event"! It was a wonderful event and we very much appreciate the support.

Root for Trees Fest is an annual event which

highlights the City of Edmonton's Root for Trees Initiative, a program that makes it easy for Edmonton residents to plant trees. You can view photos of the event, including planting at 355 Hemingway Road NW, in our Facebook Album.

This is the second year Nature Alberta has had the opportunity to participate in the event and it was an extra special day for us. Cody Elford, Glastonbury Branch Manager with RBC, was in attendance to present a \$5000 grant cheque to the Living by Water Project. Program Coordinator Laura Edwards thanked RBC Bank on behalf of Nature Alberta. To watch the presentation, go to: <http://bit.ly/1pkaGES>.



**PARTICIPANTS WERE TREATED TO A GREAT DEMONSTRATION ON HOW TO PLANT THEIR TREES.**



**TREE PLANTING TEAM WORK!**

## Nature Alberta on CTV Morning Live (Edmonton News)

Nature Alberta Program Coordinators Erin Campbell (Bird Conservation) and Candace Farrar (Young Naturalists Club) made an appearance on CTV Morning Live in Edmonton recently to promote Nature Alberta's International Migratory Bird

Day (IMBD). The event took place on May 24, 2014 and thanks to the support of partners and volunteers, it was a huge success! Many thanks to our hard working staff for planning this event from scratch; it was the first IMBD event we've organized.



**ERIN (LEFT) AND CANDACE (BESIDE HER) ON CTV.**

## Running Nature Alberta

Nature Alberta relies on donations from organizations and individuals like you who make our work possible. Please support our nature education, conservation and citizen science projects. Your support helps Nature Alberta effect change on issues of provincial significance, including bird conservation, species at risk and wilderness protection. All financial and in-kind contributions are gratefully acknowledged.

## Twitter Success

Cheyenne Kean Lemery, Nature Alberta Communications Specialist, reports that we now have one thousand followers on Twitter. You too can join the Twitter parade (@NatureAlberta); go to the Nature Alberta website (naturealberta.ca) to sign up.

## New ANPC Representative

The Alberta Native Plant Council, a Nature Alberta Corporate Club, has a new representative. Jennine Pedersen will take her place on our Board of Directors, replacing

**JENNINE...DOING WHAT NATURALISTS DO!**



To make an online donation, go to our website (naturealberta.ca) and click the Donate button on the left. Alternatively, you can mail a cheque to: Nature Alberta, 11759 Groat Road, Edmonton, AB, T5M 3K6. Or, you can be a partner with Nature Alberta through ongoing support via direct debit; your monthly or recurring gift allows us to plan ahead and respond to conservation issues around the province.

## BBO gets \$25,000 Grant

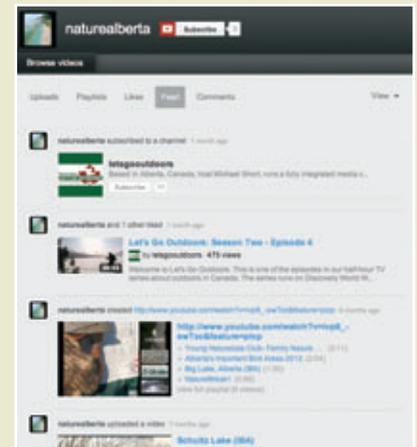
We are happy to share this good news! Our friends at the Beaverhill Bird Observatory (a Nature Alberta Affiliate) successfully received a \$25,000.00 grant to support Tree Swallow Conservation, thanks to voters of Shell FuellingChange. Way to go BBO! Shell FuellingChange is an exciting program that supports environmental projects and organizations selected by voters.

Chrissie Smith. Jennine, who lives in Edmonton, is currently a grad student at the University of Alberta dealing with the assisted migration of rare plant species.

## Nature Alberta & YouTube

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

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



## BIG NEWS!!

Our new, FREE online Alberta Birds Checklist is now available!

<http://naturealberta.ca/nature-alberta-introduces-new-free-publication-series/#Alberta#Birds#Free>



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

## Nature Diary: Firsts on Life List!

BY DEBBIE AND ALAN GODKIN

*It was a surprise to see a Lark Sparrow this far north (Westlock area, May 18th, 2008).*

It appeared in our yard along with three Swainson’s Thrushes, one Savannah Sparrow and two Vesper Sparrows. While the other birds hung around for two days, the Lark Sparrow moved on within an hour of my spotting it.

We also had a lone House Finch here for the first time on April 13, 2008 and for a second time on November 13, 2008. I have been keeping a record of bird sightings for well over ten years and had never seen either of these birds here before. My list of “Firsts” keeps growing!

SUMMER 2014

13



**LARK SPARROW.**

DEBBIE AND ALAN GODKIN



**HOUSE FINCH.**

DEBBIE AND ALAN GODKIN



JOHN WARDEN

## Close to Home: Nature Photography in Alberta

# It Starts With a Song!

BY JOHN WARDEN

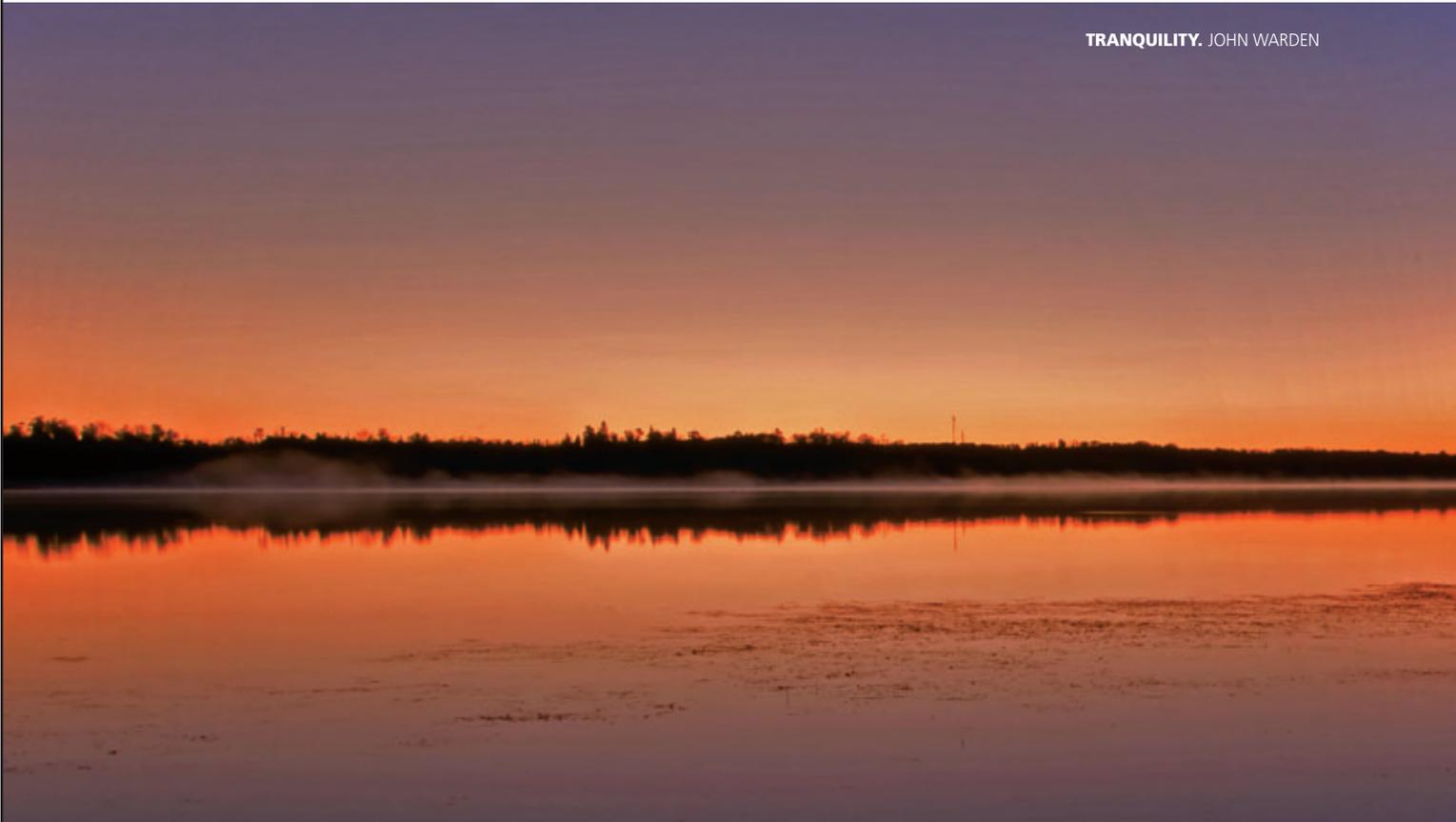
My mother sang to me when I was little, which is maybe why I start most mornings with a song in my head. Then, pattering around the kitchen, I start singing to myself. Usually it's something from the sixties, folk or rock, but there I was

the other morning singing *A Teddy Bear's Picnic*. I don't know where that came from after all these years, but I'm glad it did because as the words came out of my mouth, I stopped to consider what I was singing.

If you go down in the woods today, you're in for a big surprise.

I like the idea of nature being full of surprises and that on any given day we may find 'every bear that ever there was', or a sunny meadow where we

TRANQUILITY. JOHN WARDEN





THE RHYTHM OF CLOUD PATTERNS. JOHN WARDEN

can imagine teddy bears having a picnic. And just like that, in singing those words, I had a much clearer understanding of what an appreciation of aesthetics in nature was all about.

Aesthetics is both a study and practice that is concerned with how we think and feel about the beautiful: the beautiful we find in ourselves, in others, in art, or in nature. In singing *A Teddy Bear's Picnic*, I realized that the aesthetics of nature can be thought of as the very surprises we might find when we go into the woods, or any other wild and natural place. And, if we're open to being surprised, if we're open to the beautiful, then we'll likely discover something amazing.

Canadian painter, Emily Carr would go down to the woods. She'd leave her home in Victoria, B.C. and go sit among the cedars, Douglas Firs and Sitka Spruce trees to seek inspiration.

You spread your camp stool and sit and look round. Don't see much here. Wait. Everything is green. Everything is waiting and still. Slowly things begin to move, to slip into their places.

Groups and masses and lines tie themselves together. Colours you had not noticed come out, timidly or boldly...The air is alive. The silence is full of sound. The green is full of colour. Light and dark chase each other. Here is a picture, a complete thought, and there another...

There are themes everywhere, something sublime, something ridiculous, or joyous, or calm, or mysterious. Tender youthfulness laughing at gnarled oldness. Moss and ferns, and leaves and twigs, light and air, depth and colour chattering, dancing a mad joy-dance, but only apparently tied up in stillness and silence. You must be still in order to hear and see (Carr 1966).

In those three paragraphs, Carr teaches us how to look, describes some of the delightful surprises we, too, might find in the woods and then introduces some of the words that we use when talking about aesthetics: joyfulness, the sublime and the mysterious. Later, in her book *Hundreds and Thousands*, she cuts to the core of aesthetics.



**MONO NO AWARE – THE BEAUTY FOUND IN THE TRANSIENCE OF THINGS.** JOHN WARDEN

Form is fine and color and design and subject matter, but that which does not speak to the heart is worthless. It is the intensity of feeling you have about the thing that counts (Carr, 1966).

Aesthetics in nature then, is about 'that which speaks to your heart'. It's about the intensity of feelings we can discover in solitude, simplicity, subtleness, majesty, tranquility and the mysterious. In Japan, where as a culture they are perhaps more attuned to the aesthetics of nature, they include some additional aesthetic values. *Mono no aware* is the poignant beauty found in the transience of things. *Wabi-sabi* is loosely translated as an austere, imperfect beauty. Then there is *yugen* which

is the beauty of the suggested rather than the obvious and *shibumi* which means elegant, understated simplicity.

These words, these values that come to us from both the east and west, are the surprises that we can find in nature. Once discovered, we realize the importance of aesthetic values and that we can't live without them. They become aesthetic requirements - feelings and values of the beautiful that we need in our lives.

Understanding and appreciating aesthetics also becomes a significant aspect of our self-identity, because what we choose to look at, to photograph or to paint, what we regard as beautiful, becomes a part of who we are. For me, light is an aesthetic

requirement. Light calls to me and grabs my attention, showcasing the beautiful. My wife Debra, however, said that one of her aesthetic requirements is patterns. For you, maybe it's color, or texture or the rhythm of cloud formations, or all of the above.

How then can we know our aesthetic requirements? Perhaps by returning to the poetic language of Emily Carr, we can find the answer.

Something has called out of somewhere and something in me is trying to answer. It is surging through my whole being like a great river rushing on (Carr, 1966).

When Mother Nature calls to us, when we feel that connection, we can pay attention and say yes, this is important. This is a beautiful

moment with an intensity of feelings that I need in my life. Sometimes we find value in the purple majesty of mountains and other times it's the sound of frogs chuckling in bulrushes. I'm not sure that there is even a word for the feeling I get when I hear spring frogs, or sandhill cranes or trumpeter swans. Maybe it's *yoho*, the Cree word for awe or wonder. What I'm sure of though, is that all those sights and sounds are beautiful and they have a personal value to me. My life would be less-than without them. So, for me, that makes them requirements – aesthetic requirements.

As I was sitting out on our deck in the late afternoon, trying to

figure out how to link the ideas in this article together, the frogs were indeed croaking and the mallards were high angle gliding onto the surface of the storm water pond behind our home. The geese were loudly announcing their arrivals and departures and the red-winged blackbirds were chirping, trilling and chasing each other. Somewhere in the middle of it all was the sweet song of a purple finch. The grass and the trees were greening up and swallows were zooming about, feeding on new mosquitoes. Bees were humming around new buds and people were walking by, on the pathway around the pond, with their children and their dogs. A little girl, maybe two years old,

ran from the path, down to the pond and along the bulrushes. Her Mom called, but the girl kept running, so her Mom chased after her, laughing. Then, they were both rolling around on the grass, giggling. Beautiful!

If you go down in the woods today, you're in for a big surprise.

Bibliography

Bratton, J. W., & Kennedy, J. (Composers). (1932). *Teddy Bears' Picnic*. [H. Hall, Performer]  
Carr, E. (1966). *Hundreds and Thousands: The Journals of Emily Carr*. Toronto / Vancouver: Clarke, Irwin & Company Ltd.  
Parks Canada. (2013). *Yoho National Park*. Retrieved from Parks Canada: [www.pc.gc.ca/eng/pn-np/bc/yoho/visit/faire-do.aspx](http://www.pc.gc.ca/eng/pn-np/bc/yoho/visit/faire-do.aspx)

WABI – SABI, AUSTERE, IMPERFECT BEAUTY. JOHN WARDEN

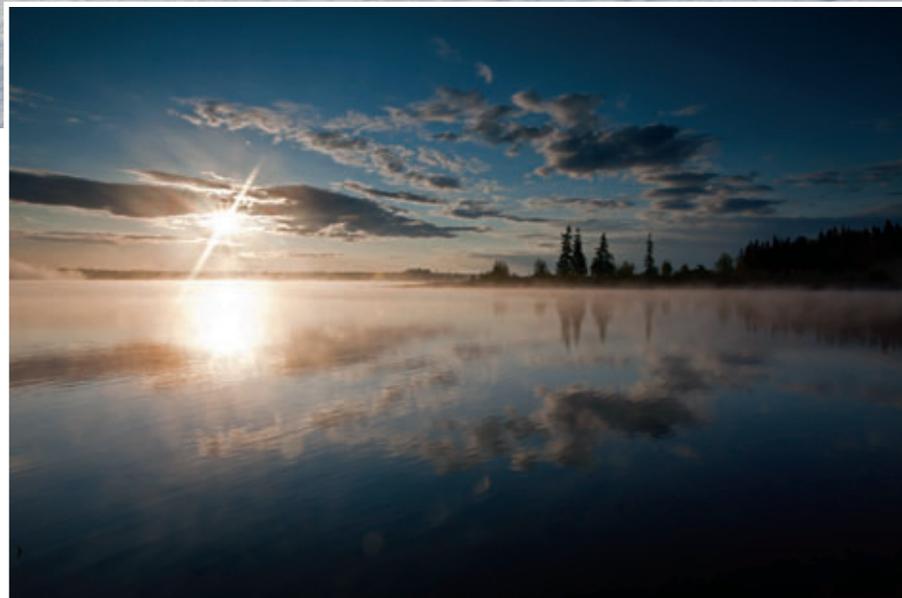




**SIMPLICITY.** JOHN WARDEN

Reynolds, G. (2009). *7 Japanese aesthetic principles to change your thinking*. Retrieved from Presentation Zen: [www.presentationzen.com/presentationzen/2009/09/exposing-ourselves-to-traditional-japanese-aesthetic-ideas-notions-that-may-seem-quite-foreign-to-most-of-us-is-a-goo.html](http://www.presentationzen.com/presentationzen/2009/09/exposing-ourselves-to-traditional-japanese-aesthetic-ideas-notions-that-may-seem-quite-foreign-to-most-of-us-is-a-goo.html)

Smart, T. (2013). Freeman Patterson's Artistic Journey. In F. Patterson, *Freeman Patterson: Embracing Creation*. Fredericton, New Brunswick: Goose Lane Editions.



**AWESOME WONDER.** JOHN WARDEN



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

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



# Eyes on IBAs

## Pakowki Lake IBA visit, and my first White-faced Ibis sighting!

BY BROOK SKAGEN, NATURE ALBERTA IBA INTERN

*Lakes, windmills, and open prairie: southeastern Alberta is bursting with hidden gems. With the sunrise in my rear-view mirror and Pakowki Lake in my sights, a sense of awe took over me as I traveled along Highway 501. The prairie was illuminated with gold and purple beauty.*

I had been convinced by the early morning songs of White-crowned Sparrows and American Robins to take the unplanned trip out to the massive prairie lake; the thrill of the birding 'hunt' swept me up and on the road bright and early! The thought of spotting the prehistoric-looking White-faced Ibis sparked my imagination – I couldn't wait!

Upon my arrival at the lake, the decision was made to stay along the intersecting 501 and 885 Highways. A co-worker and friend of mine, who knows the Pakowki Lake area well, decided to meet up with me for this birding adventure. I have never attempted to bird at Pakowki Lake before, and I wanted to get a feel for the

large site, so she was able to help me navigate and experience

all this area had to offer. Starting with the 501 area (a shallower portion of the lake), the beautiful earth tones of Cinnamon Teals immediately caught my eye, my first sighting of these waterfowl this season! Groups of Eared Grebe, Wilson's Phalarope, a pair of Gadwall and a Common Tern were also first of the year sightings for me. All-in-all, 32 species were sighted within the 2 km area, but there was not an ibis in sight.

I was surprised by the dramatic change in landscape as we



A WHITE-FACED IBIS IN THE REEDS AT PAKOWKI LAKE. LEN JELICOE

reached the Highway 885 crossing point; the lake looked as deep and vast as if it had been a prairie ocean! A colony of Pelicans was spotted across the lake creating a ruckus, as well as numerous Eared Grebes and American Coots, while Western Grebes dashed across the bobbing waters. As I returned to the car, a larger dark figure in the reeds caught my eye – my binoculars were immediately up at the ready. After about 4 seconds of performing an embarrassingly terrible happy dance, I shouted



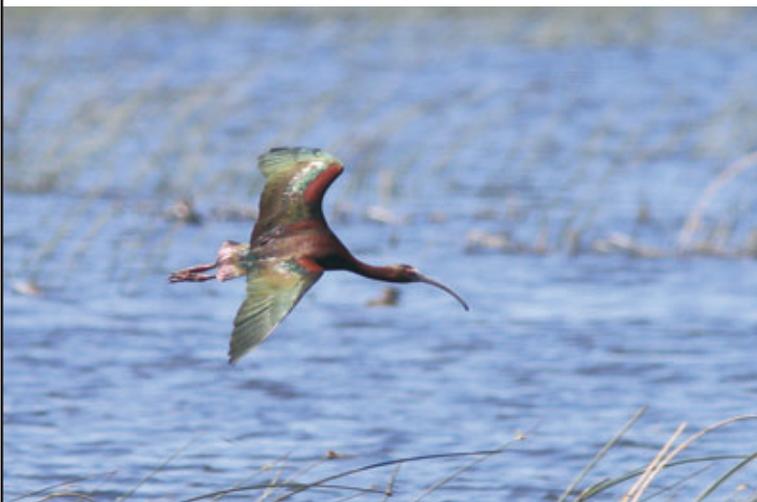
**PAKOWKI LAKE ON MAY 20TH, 2014.** BROOK SKAGEN

“IBIS”! A first for my life list, and what a bizarre-looking bird! I stared through my binoculars at the ibis as it probed through the reeds...life goal accomplished!

In total, 18 species were observed at the Northwest corner of the Pakowki IBA. As many birders know, it is always a great sense of accomplishment to enjoy a good morning of birding, especially

with those thrilling first of the season birds! I will never forget the elegance and oddness of my first White-faced Ibis, nor will I forget the quaint backdrop of Etzikom’s windmills – the Etzikom Historic Windmill Museum – so close to the vast intermittent lake of the Southeast. Pakowki Lake is truly a gem of the prairie that will remain glimmering in my memories for years to come. Happy Birding Alberta!

**A WHITE-FACED IBIS FLIES LOW OVER PAKOWKI LAKE.** LEN JELlicOE



**A YELLOW-HEADED BLACKBIRD AT PAKOWKI LAKE.** BROOK SKAGEN

### LEN JELlicOE

Len Jellicoe’s pair of photos of White-faced Ibis in the IBA article were taken on one of his trips to Pakowki Lake. Len, who first settled in Boyle AB after emigrating from England, now lives in Abbotsford BC. His website has a great selection of photos, from birds to insects to Australia; check it out at <http://lenjellicoe.zenfolio.com>. He also has an interesting blog, <http://lenanddiansadventures.blogspot.ca>. We thank Len for the use of his photos.

EDITOR'S NOTE:

The American Marten, a North American member of the family Mustelidae, is often referred to as the Pine Marten. The name "Pine Marten" is derived from the common but distinct Eurasian species, the Eurasian Pine Marten (*Martes martes*)

# The American (or Pine) Marten

BY MICHAEL PATRICK MARKLEVITZ

*The words "beautiful" and "weasel" aren't usually used in the same sentence, but there is an exception living in the woodlands of Alberta.*

With its lustrous honey-through-dark-chocolate coat, bushy tail, alert fox-like face with rounded ears and sporting a white, yellow or orange throat patch, the American Marten (*Martes americana*) is clearly the most handsome of our nine Alberta Mustelids.

The genus *Martes* comprises eight primarily forest dwelling species spread across northern and western North America and through Europe and Asia, as far south as India and Java. The American, Japanese, Beech Stone and Sable Martens form a further subgroup of very similar appearing species. By weight, the American Marten is the smallest of the genus. This might in some measure be explained by its sharing much of its range with the closely related but

markedly larger Fisher (*Martes pennanti*).

The difference in size between these two *Martes* species might serve to limit competition, with each having differing ecological requirements and adaptations.

The American Marten displays a preference for coniferous or mixed forest with a generous canopy cover and a good amount of snags and deadfall. Snags, logs, tree hollows, and Red Squirrel middens can all serve as denning or shelter sites. Abundant ground litter also serves to provide additional access to the subnivean layer both for winter shelter and hunting of small mammals. They are able climbers and seek prey

and den sites at all levels in the forest.

Like all weasels, marten are very able predators with a wide array of dietary items having been recorded. While mainly hunting small mammals up through the size of Yellow-bellied Marmots, they also take frogs, insects and in certain areas like Vancouver Island a variety of birds from grouse down through kinglets and Pacific Wrens. There are even two records of them attempting predation on Black-tailed Deer fawns, and they will scavenge from the kills of other species. When berries are in season, they will happily add these to their diet and these may serve as important food sources



USFWS/WIKIMEDIA COMMONS



for dispersing juveniles before they become fully adept at catching prey.

Large males weigh up to 1250 grams with females notably smaller. Thus, they have to contend with numerous other forest species that can prey on them. Goshawks, larger owls, Coyotes, Bobcats, Fishers and even other marten will kill them. However in many instances they are not consumed after having been killed. Perhaps, like shrews, the predator is killing in response to size and movement but thereafter finds the odour or taste not to its liking.

Marten are easily trapped and were hard hit by unregulated harvest in the last century – and they certainly lost available habitat through forest

clearance and modification. The downturn in the fur industry combined with regeneration of woodland in some jurisdictions has allowed for natural re-establishment in many areas. There has also been some area-specific re-introduction success using translocation of wild-caught individuals [see sidebar]. Their full range extends from Alaska east across the boreal regions of Canada to Labrador and south through the western mountains to northern California and the American north-east. They are currently not threatened across the majority of their range, but specific populations in the extreme west, east and south-west are low and of some concern, as they have not rebounded despite many years

of protection. In Alberta they range widely across the boreal and down along the mountains and foothill regions and are not considered under threat.

A decade and more ago I had the opportunity to come in close contact with this wonderful predator as I worked on my M.Sc. south of Grande Prairie. My research involved mark-recapture of Red Squirrels and Northern Flying Squirrels and studying their movement in relation to pipeline right-of-ways cut through the forest. But on the very first morning, the initial animal captured was a marten. By the end of two field seasons we had caught, tagged and released about 50 individuals and so included the data in my thesis.

On approaching live-trapped marten, they would often give a low call I can best describe as an attractive chuckle or twitter. This changed dramatically on a closer approach when the young animals

### **PINE MARTENS IN CYPRESS HILLS**

Pine Martens were introduced to the Saskatchewan side of the Cypress Hills June 19-20, 1986, an initiative spear-headed by Wayne Runge with the Wildlife Branch of SK Parks and Renewable Resources. In all, thirty-three Pine Martens were released: eight females with their litters (a total of twenty young), four males, and one female without young.

According to staff on the Alberta side of the Cypress Hills, there have been numerous anecdotal sightings, and conservation officers have transplanted families from the Elkwater townsite. Thus, it is suspected that the species is doing very well.

would screech while adults hissed or growled menacingly. Handling involved placing them in a close confinement bag, pulling an ear through the mesh and affixing a small metal numbered ear tag. On being released they escaped by a variety of options. Some ran straight away. Others clambered into the trees initially before jumping down and making off. Surprisingly, many of them sprinted upright only 5 or 10 meters before standing to look back and then loping off at no great speed.

Despite being as careful as we could, one of my field assistants and I were bitten. The marten that clamped down on my finger held on until I had carefully unwrapped the holding bag at which time he ran off. He was back in one of my traps the next morning and gave me a look as if to say, "would you like to try that again?!" I resisted the urge to bang the trap with a stick, instead merely recording his tag number and then opening the trap. I'd learned my lesson.

Marten are curious and I have had unhabituated individuals follow me. Like many mammals and birds, they respond to squeaking made by sucking or kissing the back of one's hand.



**RICK PRICE'S FIRST PINE MARTEN, IN BANFF NATIONAL PARK. RICK PRICE**

On one occasion when trying to draw in some kinglets by this method, my companion and I were surprised to spot a marten approaching by fits and starts while attempting to ascertain what the fuss was about.

While I know many people who have seen this species, it can avoid detection even in areas where trapping shows it to be abundant. The best chance to get good looks at martens is to look for the semi-habituated individuals that come around cabins or bird

feeders hoping to prey on the mice or squirrels likewise attracted; or they may help themselves to a meal of suet. If you haven't yet made the acquaintance of this species, I highly recommend that you try to do so. It remains one of my favorite Alberta mammals and I'm inclined to think if you get to spend even a few minutes with one, it will become one of your favorites, too.

*Michael Patrick Marklevitz is a consulting biologist based in Edmonton and working across western Canada. On his photo site, [pbase.com/marklevitz](http://pbase.com/marklevitz), he has 3000+ images of nature, many of them from western Canada (lynx, boreal owl, red fox, etc.).*

## FEATURE ARTICLE

# FLOOD – The Other “F” Word?

LORNE FITCH, P. BIOL.

*Gordon Lightfoot, the icon of Canadian folk music, intones, “When the skies of November turn gloomy,” as a warning to ships plying the waters of Lake Superior, even big iron ore carriers.*

In land-locked and generally water-short Alberta, Lightfoot’s words don’t have the same cachet, but recent storm events have begun to sensitize us.

The floods of 1995, 2002, 2005 and now 2013 have made us start to search the skies of May and June for signs of impending doom. Spring rain used to fill our prairie souls with joy; now the same rain, especially when it persists for days, fills us with a sense of angst.

With recent experiences we’ve started to look at a flood as the other “F” word. Are we justified in thinking of this phenomenon in such harsh terms?

Is it possible to have more than one “flood of the century”? Given the short reoccurrence interval, four major events in 18 years, a term like “flood of the century”



**2012 HIGH WATER – MOST FLOODS ARE ECOSYSTEM-REJUVENATING EVENTS THAT CAUSE LITTLE DAMAGE TO INFRASTRUCTURE.** KEVIN VAN TIGHEM



*Lorne Fitch is a Professional Biologist, a retired Fish and Wildlife Biologist and a past Adjunct Professor with the University of Calgary. He is a well-known speaker, writer and photographer, living in Lethbridge AB.*

**ERODED CUTBANKS AND NEW GRAVEL DEPOSITS ON FISHER CREEK (WEST OF OKOTOKS) AFTER THE 2013 FLOOD, INTENSIFIED BY THE EXTENSIVE OFF-HIGHWAY VEHICLE DAMAGE IN THE HEADWATERS WHICH BOTH HASTENED THE RUNOFF AND EXPOSED A LOT MORE SOIL TO EROSION, BLEW OUT THE CREEK. THIS PHOTO, TAKEN JULY 27 AFTER A WEEK OF GOOD WEATHER, SHOWS HEAVY SUSPENDED SEDIMENT LOAD STILL WORKING ITS WAY DOWN THE CREEK. THAT FINE SEDIMENT, DURING SUMMER'S LOW FLOWS, SETTLES INTO GRAVEL AND SUFFOCATES INVERTEBRATES, FISH EGGS AND FISH FRY THAT WOULD NORMALLY BE THRIVING IN OXYGEN-RICH WATER IN THE INTERSTICES OF THE GRAVEL. KEVIN VAN TIGHEM**



seems meaningless, more joke than a measurement to the next big event. What we need to understand about return intervals of one in a hundred years is not that a major flood happens only once in a hundred year period but rather there is a one percent chance of it happening in any year. So we can have recurring large floods stacked up, one against another.

Why do large floods occur more frequently? Maybe we need to recognize that uncertainty and extreme variability are part of the new normal for us.

Floods happen and they reoccur in a predictable way as the accumulated snow of winter meets the rising air temperature of spring. Water turns from a solid state to a liquid one and that transformation is faster than the earth's absorption rate. That's especially evident when heavy rain accompanies or follows snowmelt like the recent flood

event. The surplus water swells the thousands of tiny drainages and coalesces in the smaller streams. Those hundreds of small streams feed the larger streams and rivers, as gravity pulls water from higher elevations lower.

A wave of water rolls downstream, filling the channel and often spilling into the adjoining low-lying areas. Most of these "floods" go by and we hardly notice, short of some brownish water that can thwart the efforts of anglers and

possibly with a stronger taste of chlorine in the tap water.

What all floods have in common, the average and the not so average, is that measured over the year, this is the time of greatest volume, highest speed and most energy. All of these features are important to consider and understand flood dynamics.

Volume is the easiest one to observe; there is simply a lot more water. That water has to

**ONE SMALL EXAMPLE OF THE LANDSCAPE ABUSE THAT OPENED UP THE HEADWATERS OF THE BOW TO SUCH MASSIVE RUNOFF AND EROSION DURING THE JUNE 2013 FLOOD. THIS KIND OF ABUSE IS WIDESPREAD. KEVIN VAN TIGHEN**

fit somewhere and when the volume exceeds the capacity of the channel (the area between the banks) it climbs out of the restriction into the low lying area called the floodplain. It's a rather clever adaptation to periodic bursts of water and provides a river with a safety valve to temporarily store the excess water, outside of its channel.

Because floodplains are only used on infrequent occasions we tend to forget they exist and what role they provide. Like house insurance, we hope we will never need it, but without it we shoulder tremendous risk. It's worthwhile taking a little windshield tour after

floodwaters have receded to remind ourselves of the outer boundaries of the floodplain. The accumulated flood flotsam and jetsam are the silent messages of the river, telling us where it needs to be after the gales of June come slashing.

Speed and energy are inextricably linked. Water is a heavy substance, a cubic meter of it weighing almost as much as a Toyota Corolla. If you've ever been "bombed" by some trickster with a pail of water, you have instant understanding of the shock of an innocuous liquid hitting with such power.

Unlike the pail of water, a river's volume keeps pounding away, and as the speed increases so does the power of that water. A mere doubling of the velocity of the water quadruples its ability to erode; that's a lot of aqueous Toyota Corollas with more horsepower. When the energy of a flood comes rushing down the channel it can be alarming – pounding, grinding and carving away at the bank as it does.

This is the point where the safety valve of the floodplain becomes apparent, slowing the water down as it escapes the channel. It helps to have a floodplain bristling with trees and shrubs – natural infrastructure – because they blunt



**ELBOW RIVER BLEW OUT THE MAIN BRIDGE WEST OF BRAGG CREEK LEADING INTO THE FOREST RESERVE IN JUNE 2013. KEVIN VAN TIGHEN**



**THE SHEEP RIVER WEST OF TURNER VALLEY  
A MONTH AFTER THE 2013 FLOOD. THE  
FLOOD ATE PART OF THE ROAD BUT YOU  
CAN SEE THE RIVER IS RUNNING CLEAR.  
THERE IS NO OFF-ROAD VEHICLE USE  
AND LITTLE RECENT LOGGING ACTIVITY  
UPSTREAM FROM THIS SITE, SO THE  
WATERSHED SUFFERED RELATIVELY LITTLE  
DAMAGE AND HEALED QUICKLY. THE  
FLOOD EVENT SIMPLY MOVED THE RIVER  
CHANNEL AND GRAVEL DEPOSITS AROUND,  
WHICH IS THE ECOLOGICAL FUNCTION  
OF A BIG FLOOD (BESIDES SCOURING  
ANY FINE MATERIALS THAT MAY HAVE  
ACCUMULATED IN GRAVEL RIFFLES) SO THE  
DAMAGE WAS ONLY TO INFRASTRUCTURE  
ON THE FLOODPLAIN (LIKE THIS ROAD)  
NOT TO THE STREAM AND ITS RIPARIAN  
ECOSYSTEM.** KEVIN VAN TIGHEM



the force of that rushing water. Think of it this way: slower water, less energy.

The problem is that floodplains are such inviting places. They lure us with their flat nature, the pleasant umbrella of trees and the proximity to water. The river doesn't use them very often so why don't we develop them? To put this into perspective, Deerfoot Trail through Calgary has very little traffic on it at 2:00 am. Very little traffic still doesn't mean a mostly vacant freeway is a good place to pitch your tent. A periodically dry floodplain is no different.

When we forget how land and water function and interact, great consternation erupts from us when the river periodically reoccupies its land. Rivers become enemies, they need to be controlled, straightjacketed and made mindful of our developments. I wonder sometimes that in our pursuit of saving ourselves from rivers that

we might think long term about saving rivers from ourselves.

We resort to engineering solutions, like channelization, berms, dikes, riprap and straightening, to keep the river off "our" land. Most of these "solutions" to mitigate flood effects are really just flood transferral devices that move the problem to a downstream neighbour. Sometimes those solutions work, or they seem to for a while and then a larger flood tests them and finds the weak spots. To watch a river work in flood times - probing, pushing, attacking and outflanking the "solutions" - is an exercise in military maneuvering that most generals would envy.

There is an axiom, rarely heeded, that says in the tension between water and land, water always wins. **Water always wins!** A river holds a mortgage on the shore; it will foreclose in the fullness of time, irrespective of our puny efforts to stall the debt with our engineering solutions.

It might be instructive to look at one of the longest running flood control and mitigation experiments, an initiative of the US Army Corps of Engineers for the Mississippi River and its tributaries. For almost 200 years they have engaged in an engineering contest with water. It has included humongous dams on the Missouri River, capable of holding several years' worth of water, a massive set of levees paralleling the Mississippi River to prevent floodplains from being flooded, floodwalls (the "concrete" solution), floodways to periodically divert excess flows and channel "improvements" (read "dredging").

In spite of this, recurring floods have routinely overtopped levees inundating farms, fields, towns and homes. In the spirit of full cost accounting, these control and mitigation solutions have probably dramatically increased financial losses, not reduced them, because people felt it was safe to build, develop, farm and live in the floodplain.

The US Army Corps has had to resort to blasting open levees, allowing flood waters to reoccupy the floodplain, to save downstream businesses and people. Now, in the fullness of time and experience the Corps says, "Whenever possible the best way to manage floods is within a natural floodplain". The strategy now includes allowing more flooding to occur and discouraging development on floodplains to reduce risk and economic losses. Gee...who would've thought?

Mark Twain might have recognized this as early as 1883 when he wrote about the Mississippi:

*"Ten thousand River Commissions, with the mines of the world at their backs, cannot tame the lawless stream, cannot curb it or confine it, cannot say to it, Go here or Go there, and make it obey. Cannot bar its path with an obstruction which it will not tear down, dance over, laugh at."*

This is cold (maybe wet) comfort to many who live on floodplains. Everyone can agree that floods, especially the big ones, can be frightening, devastating and the reactions to them emotionally charged. The reality is the threats and the losses are somewhat of our own making, notably development in floodplains, but also ignoring watershed scale impacts and

routinely rebuilding to the same standards after floods occur. It has led to a raging debate over flood mitigation and costs.

A partial solution might include thinking about not only the volume of water in a flood but also how fast it is delivered to your front door. Water from snowmelt and rainfall used to take longer to get downstream. A survey of your watershed will likely show that collectively we've cleared, cultivated, logged, built roads, paved over portions, removed the meanders of streams, blown the beaver dams and drained the wetlands.

It's a short and speedy run for water to a basement near you. You see, flooding isn't simply a river issue; it is one of larger scale that begins within the watershed. Many watersheds have lost the capacity to slow down, hold, absorb and store run off. In effect, we've assisted gravity in the upper portion of the watershed with our land use footprint and then tried to fight gravity downstream with engineered structures. That's a losing proposition.

Our efforts might be better placed, working at a larger scale, with all of our watershed neighbours. What we cannot change, like the reality of an altered climate, we need to recognize, and adapt to greater

variability, especially in river flows. There is no "get out of floods free" card; they will still occur but we may be able to moderate the effects.

Let's manage our watersheds by maintaining cover, allowing water to soak in and be stored in riparian areas and in the uplands, especially in our headwater forests. We can improve watershed management by restoring wetlands and letting floodplains do what nature designed them to do. If we recognize that roads, trails and land clearing (like logging, paving or cropping) speed up and deliver water faster to those downstream, we might start to reverse the amount of our footprint.

These are all things we have control over and the capacity to change how they contribute to flooding. In terms of full cost accounting, investment in better watershed management might net us a less costly, long term response and answer to flooding. It is a different way to look at flood mitigation. But, to paraphrase the man's prayer recited by members of Red Green's Possum Lodge: "We're watershed residents, we can change, if we have to, we guess."

Oh, and let's not build anything else on the floodplain. If we continue to, Gordon Lightfoot may be inclined to pen another classic, maybe called "The Wreck of the Alberta Landscape". It will be a hit when the skies of May and June turn gloomy.

## New app is a community for naturalists

iNaturalist is a free app for iPad and iPhone designed by Jeremy Markowitz of Cleveland MetroParks. The app allows users to record what they see in nature, meet other nature lovers, and learn about the natural world. Learn more at [www.inaturalist.org](http://www.inaturalist.org).

From NAI Now Newsletter, March 12, 2014



## First Hand: TUVU at Grimshaw

TUVU is the 4-letter Alpha Code for Turkey Vulture. Mike Blom reported his “first ever TUVU this far north in my 6 years of being up here fly over my house in Grimshaw Alberta. It flew low enough for me to see it had no wing tag. I had a feeling they would make it up here eventually.

In a reply to Mike, TUVU researcher Stuart Houston said: “Mike, it is good you were there to see it. An important observation that should be published in Alberta History, with a plea to share other heretofore unpublished northern sight records.”

Nature Alberta suggests that people watch for and report tagged TUVU or those in areas where they have not previously been observed. Also ensure that the sighting has been entered into E-bird.



WAYNE NELSON

## First Hand: Observation of Two Hummingbirds

FROM NOTES BY GREG WAGNER

On October 16th, 2013, Greg Wagner and Jack Shier went to Nanton to check on/identify two hummingbirds that were reported at Jean Comstock’s feeder. They feel that the birds were probably immature Anna’s Hummingbirds (*Calypte anna*); the first bird was most likely female, the second most likely a male. They based their identification on the green crown, streaked throat and chip like call notes.

The first bird was dominant, even when not at the feeder and perched out in the open on a tree branch. Each time the second bird flew into the feeder, the more dominant bird would chase it off. Greg and Jack

were unable to find the subordinate bird for much of the time. Later in the day, however, the second bird flew into the feeder for about ten minutes and was not harassed by the more dominant bird. This afforded them good looks at the second bird and gave Jack the opportunity to get good pictures of it.

The second hummingbird was very similar to the first bird, but showed white on the end of all or some of the tail feathers more often in flight and had darker and more extensive spotting/streaking on the middle of throat.

On one occasion for about three minutes at the feeder, the first



**PHOTO SHOWS THE TAIL SPREAD AND WHITE ON WHAT APPEARS TO BE THE R3 – R5 RECTRICES, WHICH ACCORDING TO WILLIAMSON (N.D.) CORRESPONDS TO IMMATURE ANNA’S.** GREG WAGNER



**GREEN HEAD, BACK AND UPPER TAIL COVERTS OF FIRST BIRD. NOTE ALSO THE WHITE SPOT BEHIND EYE, BLACK IN FRONT OF EYE, BLACK GAPE, AND BLACK SLIGHTLY DOWN-CURVED BILL AS LONG AS OR SLIGHTLY LONGER THAN THE WIDTH OF THE HEAD, AND THE BRIGHT WHITE UNDER TAIL COVERTS, AND POSSIBLE WHITE ON RECTRICES.**

GREG WAGNER

bird was observed to pump its tail occasionally while hovering or just after landing. Occasionally, it gave a single chip call, similar to a junco. On one occasion after returning from chasing the second bird, the chip calls became more rapid, almost at the same tempo as a Chipping Sparrow singing. After listening to the calls of Black-chinned, Ruby-throated and Anna's hummingbirds, Greg and Jack felt strongly that it was most like the call of an Anna's Hummingbird.

Just three days earlier, on Oct 13th, Steve Knight and Gerald Romanchuk spotted an Anna's Hummingbird at Crossfield

(mentioned in <http://groups.yahoo.com/neo/groups/ENCmembers/>).

Anna's Hummingbirds are one of the most common hummingbirds on the Pacific coast. Oddly and according to Ross Lien on Albertabird (<http://groups.yahoo.com/neo/groups/Albertabird/>), at least five or six Anna's were seen in southern Alberta in the fall of 2013. Said Ross: "Something strange is going on." Anna's are well-known as great wanderers, even on occasion to Alberta, though the cold would prevent them from overwintering here.



**PHOTO SHOWS THE DARK THROAT MARKINGS OF BIRD NUMBER TWO.** GREG WAGNER

## First Hand: Pair of Pileateds!

Glen Semenchuk sent this great image of a pair of Pileated Woodpeckers at a suet block. One of his neighbours, Gary Petruskevich in Sturgeon County just north of Edmonton, took the photo in his backyard May 15th, 2014. Said Glen: "Definitely shows the difference between the sexes!!"

GARY PETRUSKEVICH



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

# The Changes in House Wren Reproductive Success in 24 Years

BY SARA FRISKE AND AMÉLIE ROBERTO-CHARRON

*The interesting song of a House Wren is commonly heard in dense vegetation throughout the summer months in Alberta. But how has its reproductive success differed since 1989 within the Beaverhill Natural Area?*

In 1989, Michael Quinn conducted his thesis studying House Wrens and their breeding density, reproductive success and mating system, but no one has followed up on this study until now.

House Wrens (*Troglodytes aedon*), are small, gray-brown birds with patterned wings and tails. Insects are their main food source. Their familiar song and harsh scolding when alarmed can be heard in dense shrubs and wooded areas. House Wrens can inhabit man-made nest boxes or natural cavities found in forested areas. Man-made wooden nest boxes, such as those built this past summer at the Beaverhill Bird Observatory, measure 6"x 5" x 12" with a ¾ inch circular opening. A House Wren nest cup is composed of twigs and holds about five to eight white, pink-speckled eggs, which hatch into grey downy young that fledge about 15-17 days after hatching (ODNR, 2013). They usually demonstrate monogamous mating, whereby one male breeds with one female and they share caretaking of

young, but males may be slightly polygynous having more than one female mate.

In 1989, Quinn studied the breeding density, reproductive success and mating system of House Wrens at the Beaverhill Bird Observatory, 72 kilometers east of Edmonton in rural Tofield. He used four grids of nest boxes, A-D named for the surrounding vegetation. Grid A (west poplar), mainly poplar forest, and B (west willow), of mainly willow, were located west of Lister Lake. Grid C (east poplar) had mixed vegetation composed of mostly poplar and some willow, and D (east willow), of mainly willow, were east of Lister Lake. The distance and presence of Lister Lake between grids A/B west of Lister Lake and C/D east of Lister Lake was thought to cause relatively no movement between the grids east or west of the lake, therefore allowing separation when studying the two areas.

To study reproductive success, Quinn monitored the nest boxes every three days and recorded

date of laying, hatching and fledging, as well as the number of eggs, hatchlings and fledged young. Quinn found that the grids located in poplar forests (grids A, C) had greater reproductive success, with more fledged young, while having fewer nesting attempts.

In 2013 at the Beaverhill Bird Observatory, the House Wren experiment Quinn performed in 1989 was repeated for two of his grids west of Lister Lake, grids A (west poplar) and B (west willow). The Beaverhill Natural Area has changed drastically since 1989. Due to natural forest succession, poplar and aspen have replaced willow vegetation, and the lake area has reduced in size.

House Wrens began building nests in June of 2013, and the last birds to fledge were in early August. Nest boxes were nailed to trees, facing south, 30 meters apart from one another in a grid mirroring the set up Quinn's used in 1989. This set up was used because, as according to Kendeigh (1941), House Wrens have a territorial



**HOUSE WREN SITTING ON A SHED ROOF.** SARA FRISKE, AMÉLIE ROBERTO-CHARRON

size of 0.56 Ha, and with the 30m spacing between boxes this allows four nest boxes per territory size. This is important because it promotes increased nesting attempts due to decreased intraspecific competition because of the lower nest box density within their territorial area. Grid A was set up in the northwest section of the natural area, behind the observatory, mainly in poplar forest. It had 25 nest boxes in a grid of 5 by 5. In 1989, Quinn's grid A (west poplar) had 23 nest boxes located in the west natural area with mainly poplar forest as well. Grid B was set up in the northeast section of the natural area, in a mixed forest of mostly poplar and some willow. It had 24 nest boxes with a grid of 8 by

3. In 1989, Quinn's Grid B (west willow) had 24 nest boxes located in the west natural area as well, but mainly in willow vegetation as oppose to a mix.

In our experiment in 2013, grid A was set up about one week before grid B. Twice a week the boxes were monitored to determine if any House Wrens had taken up residence, and if so, the date of laying and number of eggs laid was recorded. The eggs were monitored to determine date of hatching and the number of chicks that hatched. Hatchlings were banded eight days after hatching. Nest boxes were continually monitored until the chicks fledged, at which point the date of fledging and number of

chicks that fledged was recorded. After all chicks had fledged, nest boxes were emptied for reuse next year.

Reproductive success of these House Wrens was determined in the same way Quinn had in 1989, allowing comparisons between the years to be made, based on clutch size, number of fledged young and the proportion of nesting attempts resulting in fledged young. The average clutch size of 2013 for grid A and B was 6, and in 1989 the average clutch size was 7 for both grids. These were determined to not be significantly different via a 2 by 2 contingency table and Fisher's exact test (two-tailed p-value: 1.00). [Note: "Fisher's exact test" is



**HOUSE WREN NEST IN A NEST BOX OF GRID B. EGGS ARE BROWN-SPECKLED WHITE EGGS.** SARA FRISKE, AMÉLIE ROBERTO-CHARRON



**HOUSE WRENS HAVE HATCHED! ONLY A FEW DAYS OLD IN THIS PICTURE.** SARA FRISKE, AMÉLIE ROBERTO-CHARRON



**HOUSE WRENS AFTER ABOUT 8 DAYS. THESE ARE READY TO BAND. THE ONLY DISTINCTION BETWEEN ALL THE BROWN FEATHERS ARE THE BEAKS!.** SARA FRISKE, AMÉLIE ROBERTO-CHARRON

a statistical significance test used in the analysis of contingency tables. Although in practice it is employed when sample sizes are small, it is valid for all sample sizes.] The average number of fledged young was found to be 6 for both grids A and B in 2013, compared to an average of 6 for both grids in 1989. These were not significantly different between the grids or years studied (two-tailed p-value using 2 by 2 contingency table and Fisher's exact test: 1.00). The number of nesting attempts per grid was determined by the number of times at least one egg laid in the box. In 2013, there were 7 nesting attempts in grid A and 6 in grid B; compared to Quinn's thesis where there was an average of 11 nesting attempts over the three years he studied in grid A, and an average of 8 nesting attempts in grid B for the two years he studied that grid. It was determined using a 2 by 2 contingency table and a Fisher's exact test that these were not significantly different from each

other (one tailed p-value:0.553, two-tailed p-value:1.00).

The proportion of nesting attempts resulting in fledged young was also compared, which provided insight into reproductive success. It was found that in 2013, grid A had 86% of nesting attempts resulting in fledged young, and grid B had 83% resulting in fledged young. In Quinn's thesis of 1989, he found that grid A had 90% resulting in fledged young, but grid B had only 54% resulting in fledged young. It was found that these were significantly different according to a 2 by 2 contingency table and a Fisher's exact test (two-tailed p-value: 0.0406 and one-tailed p-value: 0.0254). We also found that in grid A, 3 chicks died of unknown causes, and 2 eggs never hatched; in grid B, 7 eggs did not hatch, which was all of the eggs in one nest box. Quinn determined that chick mortality was mainly due to abandonment of young, as well as high predation in willow grids. Predation can explain the drastic

change in reproductive success of grid B. In 1989, there was low success due to chick mortality from predation in the willow scrub, but after forest succession to an open poplar forest in 2013, reproductive success increased.

In conclusion, the compelling difference between 1989 to 2013 for House Wrens at the Beaverhill Natural Area is the difference in reproductive success. In 1989, Quinn found a higher success rate in grid A (west poplar) at 90%, compared to grid A in 2013 at 83%; while Quinn's grid B (west willow) had a lower reproductive success at 54% than in 2013 at 83%. The 7% reduction in Grid A success likely resulted from the more advanced forest succession of grid A compared to grid B, increasing the number of fallen trees in storms, decreasing habitat for House Wren nests. The age of this poplar forest compared to grid B may result in weaker, older trees unable to

act as suitable habitat, resulting in lowered reproductive success in grid A. The reproductive success rate differed more drastically between 1989 and 2013 for grid B, increasing success by 30%. The most probable cause is the increased poplar vegetation compared to mainly willow in 1989, which decreases predation on young and increases reproductive success. Although the reproductive success drastically changed between years, clutch size, number of fledged young and nesting attempts did not change significantly.

The main conclusions of this experiment are that reproductive success has differed from 1989 to 2013, increasing drastically in grid B concluding that House Wrens have greater reproductive success in poplar vegetated grids, such as

grid B of 2013, rather than dense willow grids, like grid B in 1989. As more forests succeed towards poplar stands, House Wrens will increase in reproductive success, increasing in population as well. Open poplar forests cause greater reproductive success because it allows House Wrens to detect potential predators at a distance before they invoke harm (Quinn, 1989). It is interesting to determine that reproductive success has changed significantly in 24 years, but that the average clutch size, fledgling number and nesting attempts have not. The relative stability in clutch size, fledgling number and nesting attempts is likely due to the stability of House Wren population. According to the Boreal Avian Modelling Project (2013), House Wren populations

have remained stable for many years, and House Wrens have a high rate of reproductive success. This is important because it implies that House Wrens are a strong species, well adapted to changing conditions, with the ability to remain stable in population due to high reproductive success for 24 years, and likely for more years to come.

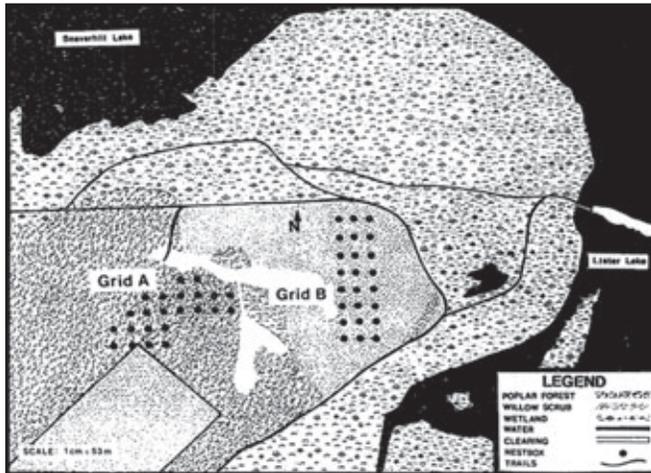
As forest succession continues at the Beaverhill Natural Area, the area will become more favorable for some birds, like the House Wren that favors open poplar forests, and less favorable for other species which prefer dense willow scrubs. With the changing forest vegetation, species will come and go, changing the diverse bird species favouring the Beaverhill Natural Area.

## APPENDICES

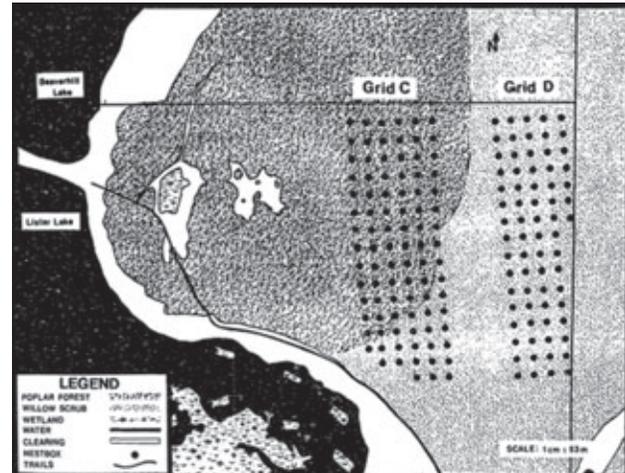
**TABLE 1.** All 2 by 2 contingency tables used. (a) Total number of nesting attempts, the number of boxes with at least one egg in it. (b) Proportion of these nesting attempts resulting in fledged young. (c) mean clutch size. (d) mean number of fledged young.

<b>(a)</b>	<b>Nesting attempts</b>	<b>2013</b>	<b>1989</b>
	Grid A	7	11
	Grid B	6	8
<b>(b)</b>	<b>Proportion of Nesting attempts resulting in fledged young</b>	<b>2013</b>	<b>1989</b>
	Grid A	86	90
	Grid B	83	54
<b>(c)</b>	<b>Mean clutch size</b>	<b>2013</b>	<b>1989</b>
	Grid A	6	7
	Grid B	6	7
<b>(d)</b>	<b>Mean number of fledged young</b>	<b>2013</b>	<b>1989</b>
	Grid A	6	6
	Grid B	6	6

**FIGURE 2(A).** West Grids of Quinn's thesis. This map shows grid A (west poplar) and grid B (west willow), both of which were west of Lister Lake. In 2013, Quinn's experiments for grid A and grid B were repeated. Derived from Quinn, 1989.



**FIGURE 2(B).** East grids of Quinn's thesis. This map shows grid C (east poplar) and grid D (east willow), both of which were east of Lister Lake. Quinn's experiment was not repeated in 2013 for these two grids. Derived from Quinn, 1989.



#### Literature Cited

Kendeigh, S.C. 1941. Territorial and mating behavior of the house wren. Illinois Biol. Monog. 3:1-120.

Ohio Department of Natural Resources. ODNR Division of Wildlife. House Wren. [www.dnr.state.oh.us/Home/species\\_a\\_to\\_z/SpeciesGuideIndex/housewren/tabid/6875/Default.aspx](http://www.dnr.state.oh.us/Home/species_a_to_z/SpeciesGuideIndex/housewren/tabid/6875/Default.aspx). Retrieved September 8, 2013.

Quinn, Michael, S. "Factors Regulating the Breeding Population, Reproductive Success and Mating System of House Wrens (*Troglodytes aedon*) at Beaverhill Lake, Alberta". University of Alberta (1989).

Sibley, David A. *The Sibley Field Guide to Birds of Western North America*. New York, United States: Alfred A. Knopf, Inc., 2003. Print.

*The Boreal Avian modeling Project*. House Wren *Troglodytes aedon*. [www.borealbirds.ca/avian\\_db/accounts.php/Troglodytes+aedon](http://www.borealbirds.ca/avian_db/accounts.php/Troglodytes+aedon). Retrieved September 28, 2013.



## Black-billed Cuckoo Update

BY TED HINDMARCH

In the Summer 2013 edition of Nature Alberta, in the "First Hand" column (page 40), Ted reported the sighting of a Black-billed Cuckoo (BBCU) by Richard Klauke near Stry and Vilna AB.

It might be of interest to note that in 2013 there has also been a number of BBCU reported in boreal/parkland areas of the province. On the Breeding Bird Survey (BBS) that I run south of Cold Lake, we had BBCU calling at 5 locations along the route on July 1, and a 6th calling near my BBS assistant's home in Beaver Crossing. There was also a report of a BBCU on a BBS route near Lake Isle, northwest of Edmonton. Richard Klauke heard one near his home south of Vilna, and Del Huget observed one in Elk Island National Park in June.

Further south, there were multiple July 2013 reports in E-bird near Finnegan Ferry Crossing on the Red Deer River, and a June 2013 report in Police Point Park in Medicine Hat and at Elkwater Lake in the Cypress Hills Alberta.

Not all sightings have been entered in E-Bird, and BBS records for 2013 are not yet available for analysis. It will be interesting to look at the trend for this species once data entry is complete and available. The BBS trend site shows very few BBCU records in Alberta over the years.

# Using Technology to Track Purple Martins

BY MYRNA PEARMAN

*Ellis Bird Farm (EBF), which is a Nature Alberta Affiliate organization, received a call one day in the spring of 2011 from Dan Olfason, an enthusiastic volunteer with the Camrose Wildlife and Stewardship Society (CWSS).*

Dan was calling to inquire about potential funding support for a Purple Martin (*Progne subis*) geolocator project in Alberta that they were hoping to launch. Geolocators, which record daily sunrises and sunsets, are revolutionizing the understanding of migration and how bird populations are connected in space and time.

I was intrigued because I had read with great interest about the amazing geolocator work pioneered by Dr. Bridget Stutchbury and her team at York University (Toronto). Dan,

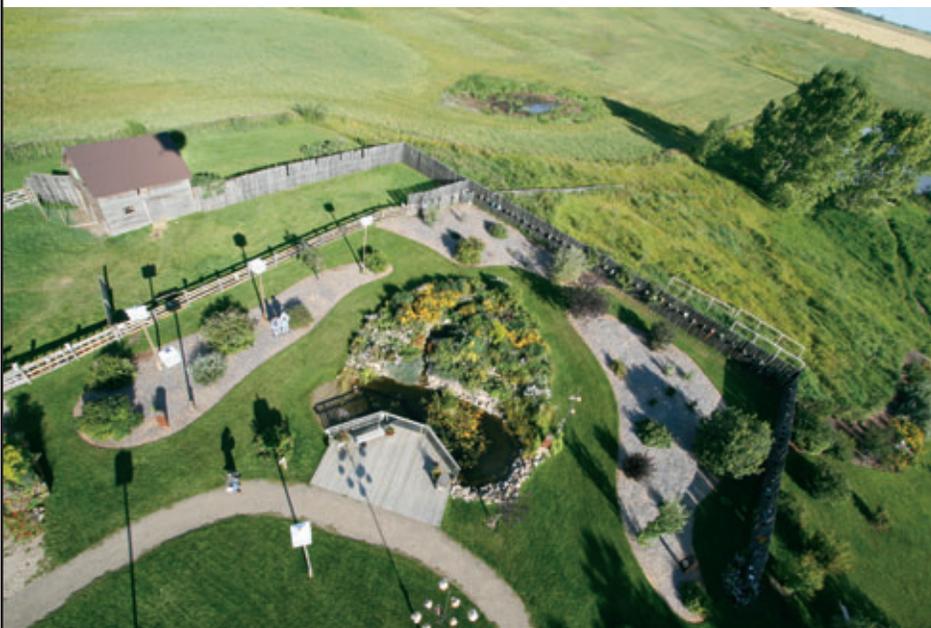
always looking for new and interesting projects, had attended a conference in Erie, Pennsylvania and suggested to Dr. Stutchbury that Alberta should be considered as a site for geo deployment because the province is located at the northern extreme of the Purple Martin range.

Ellis Bird Farm operates on a tight budget. We receive an annual operating grant from MEGlobal Canada (our industrial partner) to assist with day-to-day operations, but all special projects must be supported through

grants and donations. It just so happened that, when Dan called, we did have some available funds through a research grant we'd received from the Red Deer and District Community Foundation. I asked Dan if there might be a possibility that Ellis Bird Farm – with its thriving Purple Martin colony hosting 70 pairs – could, in exchange for offering some modest funding support, become involved in the geolocator project. He graciously accepted our request.

For the next months, plans and preparations were undertaken in conjunction with Dr. Kevin Fraser, at that time with York University but now with the University of Manitoba, and Dr. Glen Hvenegaard of the CWSS. Dr. Fraser is the lead researcher with the geolocator project. He arrived at the site on June 13, 2012 and work began on capturing the birds and deploying the locators.

Thanks to a very clever external trapping system devised by Del and Debra McKinnon of the Purple Martin Conservancy (PMC),



**AN AERIAL VIEW OF THE EBF SITE.**

MYRNA PEARMAN/EBF

**TWO EBF TEAM MEMBERS CAREFULLY  
CAPTURE A PURPLE MARTIN IN THE NEST.**

MYRNA PEARMAN/EBF

we were able to efficiently trap the birds and assist Dr. Fraser deploy 22 light-level geolocators over a period of three days at EBF and 29 geolocators in the Camrose area under the direction of Dr. Hvenegaard. With the support of PMC, our staff assisted with trapping the birds and deploying the units. The deployments were watched by a fascinated public as well as several school groups. Numerous adults and many thrilled children were able to release the birds, newly outfitted with their tiny backpacks.

As soon as the martins began arriving back at Ellis Bird Farm in late April 2013, staff and volunteers – armed with spotting scopes and binoculars – spent hours searching for returned birds. We also put the call out to all martin keepers in the area, asking them to watch for geo'd birds at their sites. With only the tiny probe visible, and then only when the feathers were in a certain position, the search was a challenge. Finally, on May 15th, we were able to confirm our first geo'd bird, a female. Using a



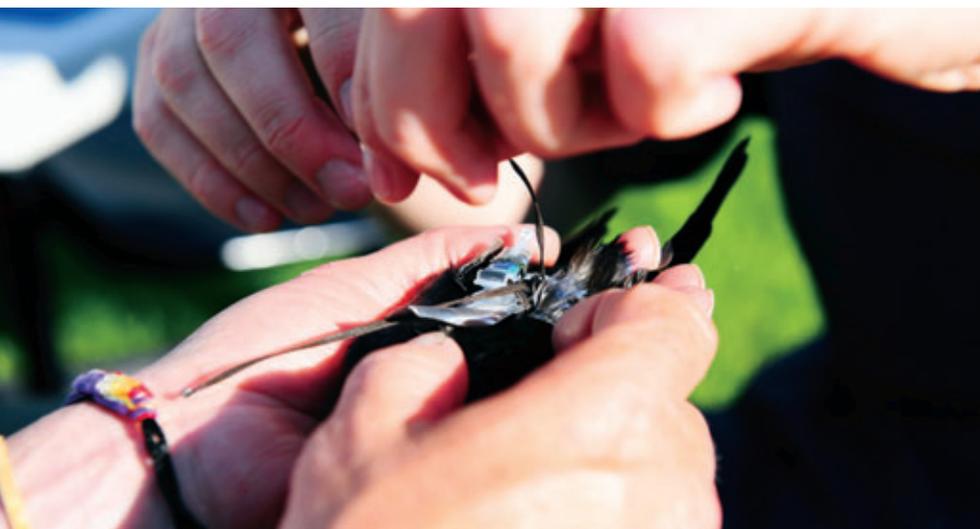
very high tech capturing system (a long-handled paint roller!), we trapped the bird, lowered the house and gingerly removed her from her compartment. In the safety of my office, with the door closed perchance she escaped our grasp, we carefully snipped off her little backpack. We were able to trap another bird that evening, a male. We carefully wrapped both units and shipped them off to Dr. Fraser.

Within a few days he had downloaded the data and, for the first time ever, was able to share with us the remarkable journey

of the first northern nesting martins ever to be tracked. We named the first Alberta bird to be tracked “Amelia” in honour of aviation’s most famous woman pilot. Her story is below.

A total of six birds were recaptured at Ellis Bird Farm and three in Camrose in 2013. This year, teams have so far recovered two geos in Camrose and eight at EBF. One geo'd male from EBF, who we named Marco Polo in 2012, returned in both 2013 and 2014! Maps (as they become available) and travelogues for the geo'd birds are posted at [www.ellisbirdfarm.ca](http://www.ellisbirdfarm.ca).

This geocator project is remarkable because it is revealing information new to science and can hopefully provide some insight into population dynamics and the effects of climate change. As well, it has offered a unique opportunity for us to share the miracle of migration with the public, especially children. It is amazing (and heartening) to see how transfixed visitors are to



**A VIEW OF THE GEOLOCATOR PROBE.**

MYRNA PEARMAN/EBF



learn of each individual bird's astonishing travels. They marvel at the speed, the distances and, most remarkably, that the birds could actually find their way between Ellis Bird Farm or Camrose and the Amazon rainforest!

Besides the thousands of public visitors every year, Ellis Bird Farm hosts 1,200 school children each May and June on spring field trips. These popular, curriculum-based programs provide children with the opportunity to engage

**RON BIEL HOLDS A PAINT ROLLER, ONE OF THE MANY TECHNIQUES USED TO CAPTURE BIRDS IN THE NEST.**

MYRNA PEARMAN/EBF

**SOME PURPLE MARTINS AGGRESSIVELY DEFEND THEIR NESTS. THIS FEMALE WAS PARTICULARLY "CRABBY."**

MYRNA PEARMAN/EBF



in hands-on, nature-based activities. The school children visiting EBF on deployment days were delighted to be offered the rare opportunity to watch the birds being retrofitted with their backpacks and to have Kevin talk to them about martins. A few of them were given the memorable experience of being able to release the birds.

Dr. Fraser and Ellis Bird Farm made more science history this year by being the first to deploy geolocators on Mountain Bluebirds. A total of 20 birds on a bluebird trail operated by EBF Board Member, Brian Biggs, were retrofitted in June. We eagerly await the return of these birds

next spring. We are hopeful that a hardy few will return bearing small backpacks which will yield as-yet-untold tales of their journeys!

**A YOUNG PURPLE MARTIN ENTHUSIAST, DAWSON SHUFLITA, HELPS RELEASE A BIRD.** MYRNA PEARMAN/EBF



Charlie and Winnie Ellis – the brother and sister duo in whose honour EBF was founded – had Purple Martins nesting on their farm in the 1960s and 1970s. The Ellis' provided bird houses and stewardship for the colony. Numbers gradually declined as tree growth crowded the houses, then a severe spring storm in 1982 killed the few remaining pairs. The martins returned to the Ellis farm in 1999 when new houses were put up under the direction and mentorship of Del and Debra McKinnon of the Purple Martin Conservancy (PMC), which is a Nature Alberta Affiliate Club. Martin numbers have increased each year. The martins are not only an important attraction at the site; they have also become an integral component of our education programs: the 70 pair which now nest on the site are enjoyed by over 10,000 visitors each summer.

**DEL MCKINNON, FOUNDER OF THE PURPLE MARTIN CONSERVANCY, HELPS A VISITING STUDENT RELEASE A GEO'D PURPLE MARTIN.** MYRNA PEARMAN/EBF

# Amelia's Story

BY MYRNA PEARMAN

*Amelia, a two-year old female Purple Martin, was banded as a nestling at Ellis Bird Farm in 2011. A geolocator (#125) was attached on June 13, 2012 and she was recaptured on May 15, 2013. In 2012, she raised three young in a gourd nest.*

Amelia traveled 13,050 mi (21,000 km) on her spring and fall migration round trip. This is the longest migration distance ever tracked for a Purple Martin; the average annual distance for previously tracked birds is about 8,700 mi (14,000 km).

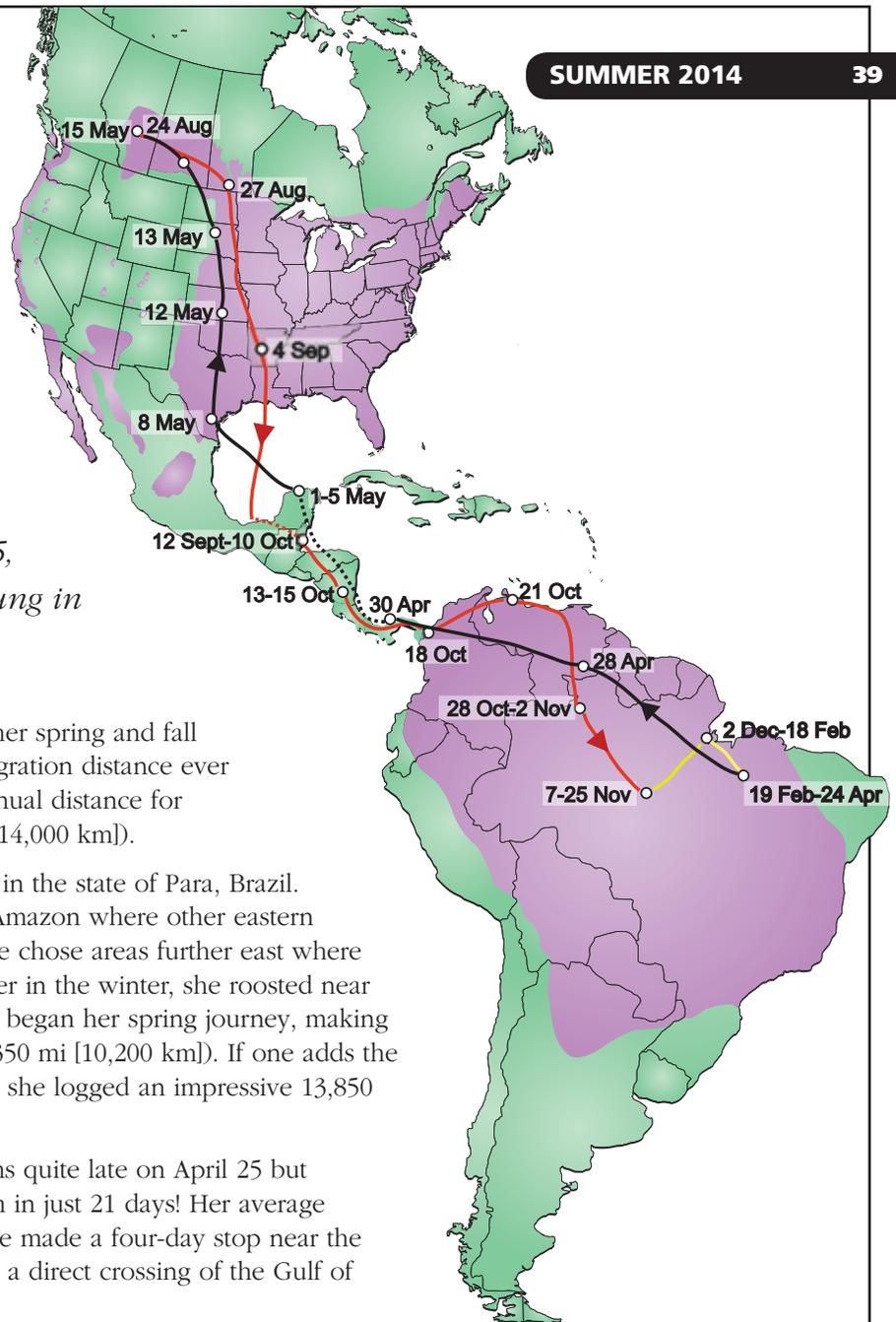
Amelia had three different wintering roosts in the state of Para, Brazil. She did not overwinter in the heart of the Amazon where other eastern martins have been tracked to, but rather she chose areas further east where there is more agricultural development. Later in the winter, she roosted near to the Atlantic coast. This is also where she began her spring journey, making her spring migration distance very long (6,350 mi [10,200 km]). If one adds the distance traveled between wintering roosts, she logged an impressive 13,850 mi (22,300 km) over the course of the year!

For spring migration, Amelia left what seems quite late on April 25 but rocketed all the way back to Ellis Bird Farm in just 21 days! Her average flight speed was 373 mi (600 km) a day. She made a four-day stop near the tip of the Yucatan Peninsula before making a direct crossing of the Gulf of Mexico.

She also crossed the gulf on fall migration. However, her fall migration was much longer, totaling 75 days. Contributing to this longer duration was a 28-day stop in Belize. Some other martins have similar long stops in this region, so researchers are now using stable isotope analysis of collected feathers to determine if this is an important area for moult.

Our thanks to Dr Kevin Fraser (University of Manitoba), Del and Debra McKinnon (The Purple Martin Conservancy) and Dr. Glen Hvenegaard and his team (Camrose Wildlife and Stewardship Society) for their assistance with this project. Thanks also to EBF staff, board members and volunteers for sharing their time and talents with us.

Our sincere thanks to the following funders: Ellis Bird Farm, Red Deer and District Community Foundation, TD Friends of the Environment, North American Bluebird Society, New York State Bluebird Society, Sherry and Marion Linn, Bird Studies Canada (James L. Baillie Memorial Fund), Dow Canada.





**"I KNEW AFTER I TOOK THIS PHOTO THAT IT WAS GOING TO BE MY FAVOURITE OF HIM." — OWEN SLATER (FROM HIS FASCINATING PHOTOGRAPHY BLOG, OWENSLATERPHOTOGRAPHY.COM – WELL WORTH A VISIT!). OWEN SLATER**

# Owen Slater's Pine Marten

BY OWEN SLATER

*With several centimeters of fresh snow overnight, it was a perfect morning to be out looking for fresh signs of wildlife in the park. As luck would have it, I was quickly rewarded.*

For mid-November, the temperature was relatively mild which might explained why this Pine Marten was out bounding through the snow that morning. I spotted the marten dashing between trees about 30 meters away. I quietly got my camera into position and hoped if I did not move, it would come closer.

The marten seemed curious and went up on its back legs to look at me from behind a snow drift. Content that I did not pose any danger, it quickly went back to searching for breakfast while I snapped off some photos.

The marten stopped a few times, cocking its head back and forth

to listen for any prey under the snow, but whatever it was got away unscathed. Just before it disappeared back into the forest, it stopped to listen from on top of a small mound, posing perfectly for one last photo before heading back into the understory.

**Visit Owen!** When not working with wildlife during his day job, Owen spends much of his free time studying and photographing Alberta's wildlife. His veterinary background provides him with a unique perspective and insights on the animals he photographs. To see more of his many photos, you'll enjoy a visit to his website at [www.owenslaterphotography.com](http://www.owenslaterphotography.com).



Up Close Naturally:

**ATANYCOLUS SP, A BRACONIDAE WASP; ITS OVIPOSITOR IS AS LONG AS ITS BODY!** RICHARD BARTZ/CREATIVE COMMONS

# Parasitic Wasps

BY MARGOT HERVIEUX

*When most of us hear the word “wasp,” we think of the un-invited guests at backyard barbecues. There are, in fact, thousands of wasps in Alberta and they eat everything from fruit to spiders to other insects.*

Wasps can be recognized by their round abdomen, usually narrow waists, and long antennae. Some have the well-known black and yellow or white markings but not all. Wasps can range in size from a few millimeters or less to several centimeters.

Colonial wasps are well known for their ability to build nests. We are most familiar with the paper globes

constructed by yellow jackets (the common name for predatory wasps of the genera *Vespula* and *Dolichovespula*) and Bald-faced Hornets (*Dolichovespula maculata*; all hornets are part of the wasp Family, *Vespidae*), but nests can also be made of other materials. Mud dabbler wasps attach tiny mud chambers to rocks or buildings while digger wasps disguise their underground chambers with pebbles and other debris.

Most wasps are predators, especially when feeding their young. They will actively hunt prey or scavenge whatever they can find. I once watched a yellow jacket return repeatedly to an open garden umbrella to grab flies that were trapped underneath.

Some of the most fascinating wasps are the solitary ichneumon or parasitic wasps. These wasps come in a variety of sizes but the most familiar are skinny wasps



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

with long, rather scary-looking “tails”.

The tail of a parasitic wasp may look like a super-sized stinger, but it is actually an egg-laying tube or ovipositor. When the wasp hears the grub of a wood boring beetle moving in the wood of a tree, it sticks the ovipositor through the bark and lays an egg in the beetle larva. When it hatches, the wasp larva feeds on its unknowing victim until it is ready to pupate.

Another group of parasitic wasps are the digger wasps. These wasps sting caterpillars and then carry them to a waiting burrow. They then lay an egg on the paralyzed insect and the wasp larva feeds on the caterpillar, preserving its feast by leaving the essential organs

**FEMALE ICHNEUMON WASP, THE BRIGHTLY COLOURED MEGARHYSSA MACRURUS; NOTE THE LONG OVIPOSITOR.** BRUCE MARLIN/CREATIVE COMMONS



until last. There is also a family of digger wasps that specializes in catching spiders.

One group of tiny wasps lays its eggs on plants instead of insects. The plants respond to the egg by growing around it to create a gall. The gall protects the growing wasp while it feeds on plant sap. The prickly balls on rose leaves are caused by one of these wasps.

We have all been trained to avoid wasps but it can be captivating to watch these insects at work. Next time you see a wasp, try following it instead of leaving in a hurry. You might be lucky enough to watch it collect building materials, work on a nest, hunt for prey, or drill through wood to lay its eggs.

### STINGERS

Stingers developed in the higher forms of wasps from the ovipositor, the egg-laying tool of the female. Ovipositors are used strictly for laying eggs. Thus, male wasps are unable to sting.

### FAIRY WASPS

The world’s tiniest known insect is a parasitic wasp, *Dicopomorpha echmepterygis*, from the Family *Mymaridae*, known as “fairyflies” or “fairy wasps.” To say this species is tiny is an extreme exaggeration; you could line up seven of them in a row and they would still not be as long as one of the smallest “no see ums” or biting midges!

## BOOK REVIEW

# Alberta Species at Risk booklet released

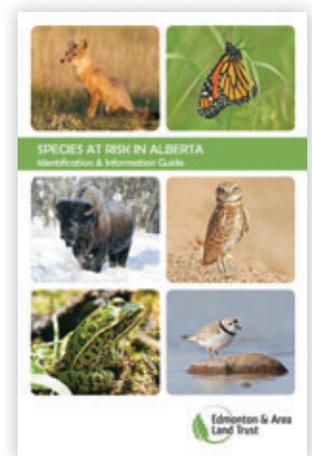
The Edmonton Area Land Trust’s (EALT) latest publication is a guide on the Species at Risk in Alberta, now available on its website ([ealt.ca](http://ealt.ca)).

Thirty-nine mammal, bird, amphibian, reptile, insect and plant species are featured in the guide, with beautiful photos from several Edmonton area nature photographers. Some of these species could potentially be found on the land that EALT works diligently to conserve in

perpetuity, and those species are indicated in the guide.

Said Cliff Wallis, Vice-President of the Alberta Wilderness Association and national award-winning conservationist: “This is a great introduction to the many species at risk in Alberta. The Edmonton Area Land Trust is helping by conserving habitats for native species in the Edmonton area. Becoming better informed and supporting conservation organizations like the EALT helps protect our species at risk.”

The guide was a tremendous effort that was only possible with the help of volunteers. Funding for developing the guide was provided by TD Friends of the Environment Foundation.



# Wildlife! Starring...

# The Red-necked Grebe

*(Podiceps grisegena)*

BY SANDRA HAWKINS

*"In order to see birds, it is necessary to become part of the silence".*

—Robert Lynd

The winter Olympic Games are long over, and soon it will be time for those of the summer to begin. Some may question the timing of this statement and opine that the summer games do not occur until 2016. I disagree. I think in terms of a different sort of Olympiad—the one that unfolds with each successful return migration and nesting cycle.

Surviving on the wintering grounds, completing the long flight northward, seeking a mate, locating and defending a nesting territory, building a nest, mating, laying eggs, protecting, feeding



**A YOUNGSTER GETS FED A MINNOW, WHILE A SECOND CHICK SITS – BARELY NOTICEABLE – ON THE OTHER ADULT'S BACK.** SANDRA HAWKINS

and raising the young all in such a short period of time, is truly a feat of Olympian proportions. Human athletes train for a scant number of years. Birds train for their entire lives.

In spring, soon after the ice recedes from Alberta's lakes and prairie sloughs, the plaintive wail of the Red-necked Grebe shatters the winter's silence. Although its sound may not be as musical or as lilting as that of the White-throated or Song Sparrow, it announces that a new

season has begun with grand changes in the offspring.

## **DESCRIPTION, DISTRIBUTION AND RANGE**

Shedding their subtle gray feathers of winter, the Red-necked Grebes that return to Alberta in March are clad in avian finery. With their chestnut necks, distinctive large white cheek patches, natty jet black crowns, dark gray head and long black bills that are yellow at the base, the birds are a sight to behold. They are a medium-sized grebe with a length of 43-56cm and a wingspan of 61-88cm with weight averaging 800-1600g. The sexes are similar in colouration, although the male tends to be larger than the female.

The Alberta Biodiversity Monitoring Institute states that they are the "most common diving bird on most lakes in



**AN ADULT RED-NECKED GREBE PEERS OVER THE EDGE OF ITS NEST.** SANDRA HAWKINS

central Alberta". The Atlas of Breeding Birds of Alberta illustrates their widespread distribution in every "Natural Region" in the province. Autumn migration in October and November carries the birds to the calmer coastal waters of southern British Columbia, although some may range as far south as California.

### COURTSHIP

Red-necked Grebes commonly form breeding pairs while still on the wintering grounds and they tend to be monogamous during the breeding season that lasts from May to September. Sexual maturity occurs at 1-2 years.

The courtship period is noisy and active and may become highly aggressive, especially when other Red-Necked Grebes dare venture too near. Although the birds tend to be largely silent during the non-breeding period, such is not the case when pair bonds are being established. Whether singly or as part of a duet, the birds commonly enter into bouts of loud wailing during their highly ritualized courtship and territorial defence displays. At times they appear to run on the surface of the water as they rush closer together in an upright position and present each other with "gifts" of green vegetation. Thrashing of wings, hunching of bodies and pointing of bills upward are parts of the "arsenal" employed when interlopers begin to encroach.

### HABITAT AND NESTING

In spring, Red-necked Grebes seek out marshy ponds and shallow bodies of fresh water. Although the male initiates site selection, both birds are involved with nest building. Aquatic (emergent) vegetation forms the primary building material for nests that are built atop a "platform" of floating plant material. Nests are often secured to vegetation at the bottom of a pond. The upper layer of the nest consists of sticks and bulrushes. It is not uncommon to observe a nest entirely surrounded by open water.

A clutch of 1-9 light blue eggs is laid in a depression formed in the middle of the nesting

**COURTING RED-NECKED GREBES INDULGE IN "LOUD WAILING"!** SANDRA HAWKINS



**FEEDING TIME AS THE YOUNG SNUGGLE UP TO A PARENT.** SANDRA HAWKINS



**AN ADULT FEEDS A FEATHER TO ONE OF ITS CHICKS.** SANDRA HAWKINS



**AN ADULT IN BREEDING PLUMAGE.** SANDRA HAWKINS



mound. Both parents share incubation duties lasting 21-33 days. Immediately upon hatching (asynchronous), the downy and precocial chicks climb onto a parent's back where they will spend most of the next 10-17 days. At times, the brood may be split between the parents in order to spread the demand for feeding equally between the adult birds.

The parents continue to feed the young for approximately 50 days. Fledging occurs after 50-70 days. Normally Red-necked Grebes raise a single brood, although re-nesting after a clutch has been lost or the incubation of a second clutch is not uncommon.

#### DIET

The grebe's diet is varied and includes small fish, minnows, sculpins, crustaceans, tadpoles, aquatic insects, crayfish and some vegetation. They are also known to catch low flying insects out of the air.

Adult Red-necked Grebes ingest large amounts of their own feathers, while feathers of parent birds are found in the stomachs of their small chicks. It is speculated that these wads of feathers act as a sort of padding that protects their stomachs from sharp fish bones. They may also retard the digestion process allowing bones to dissolve and not pass into the intestine.

#### THREATS AND STATUS IN ALBERTA

Red-necked Grebe populations in Alberta are presently deemed secure. They suffer predation from foxes, raccoons, mink, muskrat, pike, Bald Eagles, gulls, ravens, crows and even American Coots. They are susceptible to disturbance from farming, fracking, road building and general human interference with the wetlands and lakes they require for feeding and nesting.

Contaminants such as heavy metals and organochlorines that accumulate in the tissues of their prey are suspected of causing thinning of egg shells and egg sterility. Boat traffic near nesting areas should be minimized to prevent disturbance to the birds and their nests.

#### Resources

[www.abmi.ca/abmi/biodiversitybrowser/speciesprofile.jsp;jsessionid=CCB6B4410F](http://www.abmi.ca/abmi/biodiversitybrowser/speciesprofile.jsp;jsessionid=CCB6B4410F) (Alberta Biodiversity Monitoring Institute-cut and paste into browser)

Atlas of Breeding Birds of Alberta, (Glen P. Semenchuk, ed.), Federation of Alberta Naturalists, 1992 (distribution maps)

[www.allaboutbirds.org/guide/red-necked\\_grebe/lifehistory](http://www.allaboutbirds.org/guide/red-necked_grebe/lifehistory) Cornell Lab. Of Ornithology

Erlich, Paul R., Dobkin, David S. and Wheye, Darryl, 1988, *The Birder's Handbook: A Field Guide to the Natural History of North American Birds*, Simon and Schuster, New York, N.Y.

Godfrey, W. Earl, 1990 Rev. ed., *The Birds of Canada*, National Museum of Natural Sciences, National Museums of Canada, Ottawa.



## Walking with Dinosaurs

FROM: WILDBIRD GENERAL STORE NEWSLETTER

### SEPTEMBER 24 - 28, 2014 – REXALL PLACE, EDMONTON

"Walking with Dinosaurs" is a live show featuring 20 life-size dinosaurs that walk, roar and stomp around the stage. This arena spectacular includes a Tyrannosaurus Rex, Brachiosaurus, Stegosaurus and more. It is based on an Australian television series developed in 2007 to educate audiences about the world of dinosaurs.

Walking with Dinosaurs will be playing at the Rexall Place, at 7515 118 Ave. NW, Edmonton. Next performance is on September 24, 2014, with the last performance scheduled on September 28, 2014. There are currently nine performances scheduled.

For millions of viewers across the globe, "Walking with Dinosaurs" has been an eye-opening show. In fact, the show has been performed more than 1,700 times in North America, Europe and Asia. Tickets are already being sold.

## CELESTIAL HAPPENINGS

# Starry Nights

## Summer/Fall (August to October)

BY JOHN MCFAUL



### FEATURED CONSTELLATIONS: PISCIS AUSTRINUS, MICROSCOPIUM, CORONA AUSTRALIS

Just peering above Alberta's southern horizon during the mid-summer months are the constellations Piscis Austrinus, Microscopium and Corona Australis. They lie beneath the much better known constellations Aquarius, Capricornus and Sagittarius that are part of the zodiac, which is the band of 12 constellations that the sun passes through during its yearly journey about the celestial stage.

Piscis Austrinus (The Southern Fish) is the easiest to locate as it contains the bright star Fomalhaut which marks the southern fish's mouth. In some depictions it is this mouth that receives the waters that pour out from Aquarius' vase. To some it symbolizes the drinking of the flood to save the world. Fomalhaut is sometimes thought of as the loneliest star as there are no other bright stars nearby. It appears to have at least one planet orbiting it. Look for it low in the southern sky in the late evenings of autumn.

A little to the west of Piscis Austrinus is the obscure constellation Microscopium (The Microscope). It was invented by the French astronomer Nicolas Louis de La Caille after his voyage to study the southern stars as seen from South Africa in 1757. It and the constellation of Telescopium were invented by La Caille to commemorate the study of the microcosmos and the macrocosmos, the infinitely small and infinitely large aspects of the universe

that we are immersed in. A third infinity is the ability of the human mind to attempt to comprehend the universe.

Corona Australis (The Southern Crown) was one of the original 48 constellations described by Claudius Ptolemy, the 2nd century AD astronomer. It is often associated with Bacchus, the god of wine. He was the offspring of Jupiter and the

mortal female Semele. She was tricked by Juno, the wife of Jupiter, to receive Jupiter in his undiminished glory. This power of his affection was too much for Semele and she was turned to ashes. Before her demise her unborn offspring Bacchus was rescued. He later placed the crown into the heavens to honour his mother. The crown is also thought of as a wreath that was placed on the head of the victors of the ancient Greek games.

### CELESTIAL HAPPENINGS

- Sun:** Rise – August 1 (5:50 MDT), Sept. 1 (6:43 MDT), October 1 (7:36 MDT)  
 Set – August 1 (21:30 MDT), Sept. 1 (20:23 MDT), October 1 (19:10 MDT)  
 Autumnal Equinox: September 22nd at 20:29 MDT  
**Note:** There will be a partial eclipse of the sun on October 23rd. The eclipse begins at 4:42 PM and ends at 5:19 PM. Maximum eclipse will occur at 4:03 PM.
- Moon:** Full – August 10, Sept. 8, Oct. 8  
 New – August 25, Sept. 24, Oct. 23  
**Note:** There will be a total eclipse of the Moon on October 8th. The partial phase starts at 3:18 AM. Totality begins at 4:27 AM and ends at 5:22 AM.
- Planets:** **Mercury** is too close to the sun to see until the last couple of days of October when it may be seen very low in the east a little before sunrise.  
**Venus** shines brightly above the ENE horizon a little before sunrise in August. On the morning of August 18th it will be very close to Jupiter. On August 23rd the waning crescent moon will join the group. Afterwards it soon moves too close to the sun to be seen.  
**Mars** will continue to shine fairly brightly in the SW evening sky through the summer and early fall months. As time progresses it will descend closer and closer to the south-western horizon. On August 31st both Saturn and the crescent moon will be nearby. On September 28th it will be quite close to Antares. Antares means the rival of Mars due to its red colour.  
**Jupiter** begins this time period low in the eastern sky before sunrise. As the months progress it will move higher and higher above the horizon. It will enjoy a very close conjunction with beautiful Venus on the morning of August 18th. On August 23rd the moon will make a nice grouping with the two planets.  
**Saturn** is to be found in Libra as it trails behind Mars in the southern, evening sky in early August. Saturn will pass above Mars on August 23rd. On August 31st the waxing moon will join them.

**Meteor Shower:** Perseids (August 12th, 50/hour)

*The rate of meteors observed is for dark skies well away from city lights and with no Moon.*

## CLUBS PAGE



## YOUNG NATURALISTS CLUB

# Ten Easy Ways to Bring Your Family Closer to Nature

CANDACE FARRAR, YOUNG NATURALISTS CLUB PROJECT MANAGER



*Many studies have shown that children who spend little or no time in nature are more likely to present symptoms of mental and physical health concerns including obesity and Attention-Deficit Hyperactivity Disorder.*

Recent work also shows that a child's increased participation in less-structured activities, such as sight-seeing and playing alone or with others (rather than more-structured activities like chores or lessons), is related to an improvement in his or her goal-setting abilities.

To see the benefits associated with exposure to nature and less-structured activities, families can set aside time to enjoy the beauty of nature around them. To get started, here's a short list of nature activities to help your family connect with nature and reap the associated health and cognitive benefits.

- 1 Enjoy native animals and plants in your backyard or park.** This may mean setting up a birdbath or bat house in your yard, or planting native plants in your garden. When out for a walk, remind your family to look high and low to view a variety of living things. Encourage your children to draw pictures of a plant or animal found on the walk or in the yard.
- 2 Revive old traditions, or start new ones.** Collect fireflies (or any insect!) in a jar at night and release them before bedtime. Collect leaves and encourage the little ones to make a craft with them. Play in the sprinkler outside. It doesn't need to cost anything to have fun outside!
- 3 Discover a whole new world.** Find a scrap piece of board or large rock and place it on bare earth. Come back in a day or two and lift the board. Look with wonder at the many living things that have found shelter there. Identify with a field guide if you have one.
- 4 Go camping in the backyard.** Make use of your tent or buy a small one for the kids. Enjoy the sounds of a rainstorm on the tent (as long as you have a good fly!) or the breeze on a warm day.
- 5 Take a hike.** Just because they're little doesn't mean they can't explore! The younger the child, the shorter and easier the route should be. Be prepared to stop often as they explore the area. Always remember to bring sunscreen, water and snacks. Even if you can't make it to a natural area, walk through the neighbourhood and challenge your family to look for nature.
- 6 Watch the weather.** Learn the difference between cloud types and how they form, then keep an eye out for interesting formations. This is a great skill to have throughout life!

- 7 Collect stones.** This hobby can last a lifetime! No matter where you are, there is likely to be interesting rocks, shells or even fossils. Challenge your family to find stones of every colour of the rainbow, or that are an interesting shape.
- 8 Help your kids build a tree house, fort or hut.** It's best to let kids design and build these structures themselves, but for safety's sake, an adult should always be present to give a helping hand. Building a fort will provide a sense of stewardship and create a safe, personal space for your children to enjoy.
- 9 Plant a garden.** For the younger gardeners, choose large seeds that mature

quickly. Vegetables or flowers are both great options. Caring for a garden will provide hours of time outside, as long as you guide them through and help them understand the transformation from seed to full-grown plant. If you have no space for a traditional garden, try a container garden! Planting a garden with native plants will also provide habitat for a variety of species that your family can enjoy watching.

**10 Invent a nature game.**

Encourage the whole family to think of games to play when in nature. This could be as simple as "Find ten critters or their signs" or an imaginative, complex creation of their own. Not only does this encourage imagination, but it will keep them excited to be outside!

**FAMILY NATURE NIGHTS!**

There are so many incredible natural spaces in Edmonton and its surrounding area, but not everyone knows about them! Our goal every summer is to get people outdoors and into spaces they didn't even know existed. Each Family Nature Night focuses on a different natural area around the city. Watch for word on next summer's great lineup!

# Nature Alberta

*Celebrating our natural heritage!*



*Nature Alberta* welcomes submissions of articles, photos, humour and other suitable material on Alberta's natural history. Submission guidelines for articles and photos are available on the NA website at [www.naturealberta.ca](http://www.naturealberta.ca).

## Join **Today!**

E-VERSION » Individual\*: \$25/yr

Family\*: \$25/yr

*Less \$5.00 for members of NA Clubs*

\* add \$15/yr for hard copy of magazine

**Donations welcome!**

Your support means a great deal to Nature Alberta and its conservation objectives.

MAIL TO:  
Nature Alberta  
Attn: Membership  
11759 Groat Road  
Edmonton, AB  
T5M 3K6

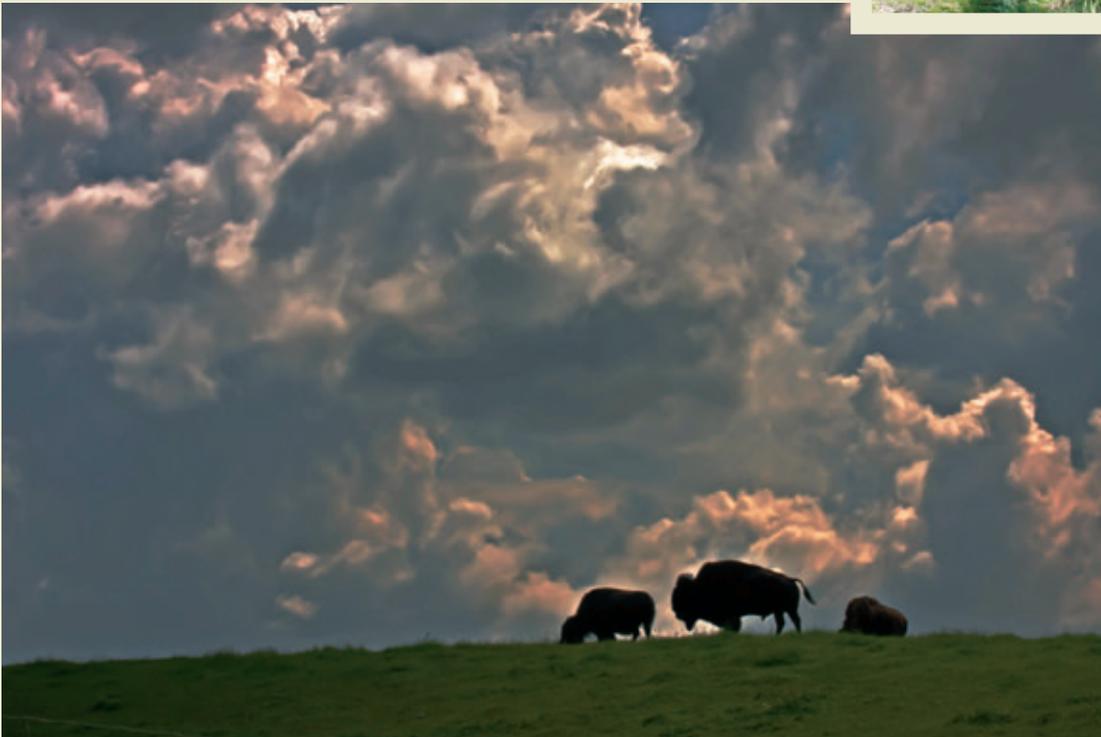


**A FEMALE  
PURPLE MARTIN  
AT A GOURD  
NEST. SEE  
STORY, PG 36.**



**ONE OF THE HARDEST WORKING  
TREE PLANTERS AT THE LIVING BY  
WATER EVENT! SEE STORY PG 11.**

**MAJESTY... SEE STORY PG 14. JOHN WARDEN**



# Nature *gallery*



**AMERICAN, OR PINE, MARTEN; SEE STORY PG 21 AND PAGE 40. OWEN SLATER**



PRINTED ON  ENVIRO 100  
PRINT

