

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



“♪ I’M A LITTLE PASTURE CREEK...♪” SEE THE FEATURE STORY (PAGE 24). LORNE FITCH/COWS AND FISH

feature article

A River Starts in My Backyard: Prairie-fed Rivers



A RELAXING BULL ELK NEAR BAKER CREEK ON THE BOW VALLEY PARKWAY. RICK PRICE



THE WEASELHEAD ANNUAL PICNIC AND LITTER-PICKING COMPETITION. SEE THE STORY, PAGE 46. YVES DANSEREAU

*Nature Alberta:
Celebrating our natural heritage*

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FALL 2013

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

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

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Editor's Page

BY DENNIS BARESCO

FOCUSING ON WILDLIFE

Every so often, Nature Alberta President Ted Hindmarch sends your Editor a note about an unusual story on the fascinating website, Focusing on Wildlife. "Celebrating the biodiversity of Planet Earth with leading articles from our global team of wildlife authors and photographers" is how it describes itself on its masthead.

It is a hugely interesting site, with superb photos and articles from around the world. There's a good mix of pure nature ("Foxy Face" from South Africa), international issues ("Should the slaughter of wolves in British Columbia be banned?"), videos ("Aerial Ballet: Dance of the Dunlins") and some of the best photos you might ever see ("Dalmatian Pelican").

Bottom line: it's a marvelous site; check it out often: focusingonwildlife.com.

BEES

It's no longer in doubt that bee populations are crashing. A certain group of pesticides – "neonicotinoids" (neo-nico-teen'oids) – are heavily implicated. It is not just bumblebees and honeybees; it may have devastating effects on all pollinators and songbirds.

With this edition of *Nature Alberta*, you will get an excellent free report from the Wilderness Committee: hard copy insert if you get the magazine in the mail; and as a pdf if you get the e-version. Please read it and get to know what the issue is all about. Share the report with friends and family.

There are innumerable important issues confronting those who like nature; pollinators in peril is but one, though long term it may be one of the most devastating. Well, at least everyone can do something with this one, starting with reading the report. Bees and Canadian honey producers thank you in advance!

DOES NATURE ALBERTA DO ANYTHING?

If you've ever wondered what Nature Alberta actually does, there are several reports in the "Nature Alberta News" section that give you a pretty good idea of at least some of our activities (though by no means all!). The reports start with the "President's Report" on page 12. Nature Alberta doesn't brag a lot about its accomplishments – which may be a public relations and promotional problem it has – but there is definitely no lack of action, in particular considering our relatively low annual budget.

THE NORTHERN GOSHAWK VIDEO

Ever wondered how a Northern Goshawk with a huge wing span can fly through the forest without hitting the trees? Northern Goshawks are a highly versatile and adaptive bird. In this absolutely amazing video, you can have a good look at these survival instincts at -40X camera speed. Go to: www.youtube.com/embed/2CFckjfp-1E



DALMATIAN PELICAN (*PELECANUS CRISPUS*) IS A GLOBALLY THREATENED SPECIES DUE TO HABITAT LOSS AND PERSECUTION. BUT IN EUROPE THE SPECIES HAS SHOWN A REMARKABLE RECOVERY, ESPECIALLY IN GREECE, WHERE IT HAS BENEFITED FROM TARGETED CONSERVATION EFFORTS, INCREASING BY 289% SINCE 1995. JARI PELTOMÄKI/WILD WONDERS OF EUROPE

EDITOR'S PAGE cont'd...

NO THOUGHTS?

Last edition, I had asked readers about the condition of Beaverhill Lake (it is basically and almost continuously dry) in relation to its waterfowl value. Several questions come up which I was hoping readers might respond to; alas, no responses were received. It is a complicated subject, with various stakeholders having various interests and opinions, but the lake is certainly important enough to ask and answer the questions. So, I'll ask again.

- Does the lake still meet the IBA requirements?
- Can it still be called a RAMSAR wetland?
- What are the reasons for its deterioration?
- Can Beaverhill Lake be restored? If so, how?

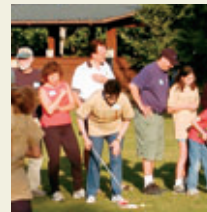
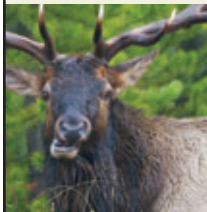
You can send me your thoughts on any aspect of Beaverhill Lake: wildhvn@memlane.com. And thank you.

On the Covers:



FRONT COVER

Cropland and pasture stretches far into the distance; only a somewhat narrow band of vegetation separates it from the creek. Is it enough? That is where the Alberta Riparian Habitat Management Society (more commonly known as "Cows and Fish") comes in. They hope to foster, as it says on their website, "a better understanding of how improvements in grazing and other management of riparian areas can enhance landscape health and productivity, for the benefit of landowners, agricultural producers, communities and others who use and value riparian areas." Part of that are the rivers that start in our backyard; Lorne Fitch and Kelsey Spicer-Rowe provide a thoughtful look in this edition's Feature Story, page 24.

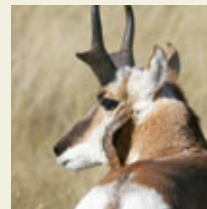
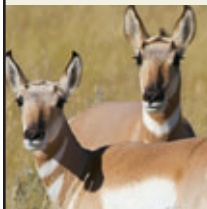


INSIDE FRONT COVER

Mid-September to the end of October is rutting season for Elk. It is a strenuous and trying time for bulls, who seldom feed during this period, thus losing a considerable amount of weight. This splendid bull Elk was captured by Rick Price on October 19th, relaxing and chewing its cud, near

Baker Creek on the Bow Valley Parkway.

As the article on page 46 indicates, the Weaselhead/Glenmore Park Preservation Society – a Nature Alberta Affiliate Club – is very active and dedicated to its mandate. And as Yves Dansereau's photo of the Weaselhead annual picnic and litter-picking competition illustrates, people of all ages take part. Definitely, the Weaselhead/Glenmore Park Preservation Society is an excellent group!



INSIDE BACK COVER

It's September 22nd and Rick Price is wandering the prairies around Medicine Hat, looking for a photographic fall event. He finds it. As he explains: "Today, I saw a buck Pronghorn defending his harem from another buck. What a rodeo-kind-of-fun to watch – boy, can they go! It also gave me a

chance to get closer. In the one image is the buck's harem with him in the foreground; the other image shows the buck looking back at me."



BACK COVER

It's not often one gets to witness an ongoing battle between two different squirrel species: in this case, a Richardson's Ground Squirrel (the usurper), and a Red Squirrel (the defendant). But with the proper conditions and habitat, who knows what excitement waits? Debbie and Alan Godkin know! See the story of it all, page 32.

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ALBERTA ISSUES IN BRIEF

Will Health Canada Ban Bee-killing Pesticides?

Will Health Canada Ban Bee-killing Pesticides?

In September, Health Canada's Pest Management Regulatory Agency (PMRA) issued a statement, saying that it "has determined that current agricultural practices related to the use of neonicotinoid [neo-nico-teen'oids] treated corn and soybean seed are affecting the environment due to their impacts on bees and other pollinators."

Whether that determination will ultimately result in a ban is unknown, but many experts are hoping Canada will follow jurisdictions like Europe (which on April 29th, implemented a two-year suspension).

Health Canada is providing the public and interested parties an opportunity to comment on its intended actions. The intent, along with how to comment, can be found at this Health Canada link: www.hc-sc.gc.ca/cps-spc/pest/part/consultations/. You are urged to make comments to Health Canada as they have requested. Comments

are requested by Dec 12, 2013 and must include the following (or your comments will not be accepted):

- Your full name and organization;
- Your phone number; and,
- Your complete mailing address or email address.

This issue is one of undeniable importance to our future. As Glen Fox, who spent his entire career in the Canadian Wildlife Service's Wildlife Toxicology Division, said: "Although death of pollinators, and honey bees in particular, have received most of the attention, there is strong evidence that the neonicotinoid insecticides are also very toxic to birds, and that they reach toxic concentrations in surface waters."

This spring, Health Canada's PMRA concluded that neonicotinoids only present a problem "during spring planting" and went ahead on July 13th to quietly re-license a neonicotinoid, *Clothianidin*. But in August,



several beekeepers reported bee losses in the millions. Sierra Club Canada is hoping to force a reversal of the re-licensing decision; on Sept 19th, they filed a court objection.

If you receive a hard copy (Canadian addresses only), you will find an excellent insert with this magazine entitled "Disappearing Bees", produced by the Wilderness Committee. E-version members will get the insert through a pdf. It explains very well the incredible role pollinators, like bumblebees and honeybees, play in our life and the threat to our future from neonicotinoid insecticides. We thank the Wilderness Committee (www.WildernessCommittee.org) for providing us with this report for your reading pleasure.

University of Alberta Birds and Windows Project

FROM BIRD STUDIES CANADA "LATEST NEWS" OCT 18, 2013

Estimates suggest that up to one billion birds die in North America annually as a result of collisions with windows. A recent Environment Canada study indicates that collisions with residential and commercial buildings kill between 16-42 million birds in Canada each year – mostly at houses.

The University of Alberta Birds and Windows Project was designed to use Citizen Science and active participation to identify factors that affect collision risk at residential homes, and to better understand what can be done to reduce bird window collisions.

The researchers are seeking participants for this study. As a volunteer, you can help by reporting on bird window collisions observed in the past, and by regularly searching around your residence for evidence of bird window collisions. To get involved, visit the **Birds and Windows website**.

Canadian scientists publish human-related bird mortality estimates

BY BIRD STUDIES CANADA, LATEST NEWS, OCT 10, 2013

Scientists with Environment Canada have found that human-related activities destroy roughly 269 million birds and 2 million bird nests in Canada each year.

Most human-related bird deaths (about 99%) are caused by impacts of feral and pet cats, and collisions with buildings, vehicles, and electricity transmission and distribution lines. Over the last four years, a team of twenty Environment Canada scientists conducted extensive analyses that enabled them to release the first-ever estimates of annual direct bird mortality from human-related sources.

The results were published on October 1 in a special issue of *Avian Conservation and Ecology*, an open-access, fully electronic scientific journal sponsored by Bird Studies Canada (Canadian BirdLife co-Partner) and the Society of Canadian Ornithologists.

“Because birds are excellent indicators of biodiversity, the newly-released articles from Environment Canada highlight areas where broader biodiversity may be impacted”, said Dr. George Finney, President of Bird Studies Canada. “These results provide a crucial first step toward understanding the relative importance of bird mortality factors, and will inform future research directions, conservation actions, and policy decisions.”

“We are deeply troubled by the disquieting research published today on the number of birds killed every year in Canada due to human-related activities”, said Ian

Davidson, Executive Director of Nature Canada. “Fortunately, there are concrete and sensible ways that people and governments can prevent the needless death of birds, especially now during the migratory season.”

Collisions with electricity transmission and distribution lines have been identified as the second-largest human-caused source of bird mortality in Canada (cats are first; see the sidebar). Between 10 and 41 million birds per year are killed by collisions with transmission lines; between 160,000 and 800,000 birds are electrocuted by distribution lines; and about 400,000 nests are destroyed annually due to vegetation clearing under powerlines.

Collisions with residential and commercial buildings are the third-highest of the human-related sectors, killing an estimated 16 to 42 million birds each year – mostly at houses (see the “Issues” article, “University of Alberta Birds and Windows Project”). Following bird-friendly building guidelines can help individuals and building managers reduce the risk to birds.

An estimated 13.8 million birds are killed annually by colliding with vehicles on Canada’s primary and secondary roads.



A NORTHERN FLICKER, DEAD AS A RESULT OF RUNNING INTO THE WINDOW OF A SKYSCRAPER. ANNETTE PRINCE, DIRECTOR OF CHICAGO COLLISION MONITORS

There are about 10 billion birds in Canada. The estimated total of 269 million bird deaths per year caused by human-related factors constitutes less than 5% of the overall population. Bird deaths from other causes (such as natural predation, disease, severe weather, or habitat loss) are not reflected in the estimates.

100 MILLION PER YEAR

Cats appear to kill as many birds as all other sources combined. Feral and pet cats are believed to kill more than 100 million birds per year in Canada; an estimated 60% of those are killed by feral cats. Bird species that nest or feed on or near the ground are especially vulnerable to cat predation. As these findings confirm that huge numbers of Canadian birds are killed by cats annually, further research and conservation efforts are needed.



DR. RELLING/
WIKIMEDIA COMMONS

Alberta's New Wetland Policy

SUMMARIZED FROM AN ARTICLE BY ERIN FLANAGAN FOR THE PEMBINA INSTITUTE, SEPT. 23, 2013

After eight years of deliberation, Alberta has essentially handed industry a free pass when it comes to compensating for the loss of wetlands in the oilsands region. The policy gave the oilsands industry at least a two-year exemption from taking any responsibility for wetlands.

Despite the significant land impacts associated with expansion of the oilsands, the policy does not extend to Alberta's public lands until 2015 and exempts from its rules the many projects that are currently operating, approved and, most remarkably, those still seeking approval. In 2011 alone, approved oilsands mining projects were expected to result in the loss of approximately 28,000 hectares of peatlands.

Despite science-based thresholds and the known environmental and economic benefit that wetlands provide, oilsands projects will not be subject to any binding compensation measures when it comes to restoring and protecting Alberta's wetlands for likely more than another decade.

The mineable oilsands area is 4,750 square kilometres — 99 per cent of which is already under lease for oilsands mining activity, and up to 65 per cent of which consists of wetlands. Research conducted by Global Forest Watch Canada suggests that, in a full resource development scenario, mining and in situ developments combined could result in the loss of as much as 460,000 hectares of peatlands.

A 2008 report by the Alberta Water Council — the body delegated by the Government of Alberta to

recommend a wetland policy for the province — recommended a “no-net-loss” policy on wetlands. Unfortunately, the government's new policy abandons a past goal of no net loss in southern Alberta and allows for valuable wetlands in northeastern Alberta to be destroyed without compensation. In cases where wetland loss is inevitable, the new policy provides oilsands developers with two options: either compensate for wetland destruction by restoring or constructing a new wetland in the province, or instead of restoring the wetland, pay a fee to support research, monitoring or public education.

According to analysis from the University of Alberta, the average cost to compensate for one hectare of wetland destruction is \$7,600. Pembina's own research suggests that oilsands mines disturb an average of 9.4 hectares per million

barrels of oil produced, meaning that if a mine was located in 100 per cent wetland habitat the cost of compensation would be merely seven cents per barrel.

Despite the small per barrel economic impacts to oilsands producers, the Canadian Association of Petroleum Producers has lobbied against implementing a strong wetlands policy. The Government has also said that it would be “too onerous” — and too costly — to require projects in the application stage to meet the new standard. However, claims that wetland replacement compensation costs are infeasible and cost prohibitive for the oilsands industry have never been substantiated, making this regulation holiday all the more curious.

A small number of leading oilsands companies, like Shell and Suncor, are already voluntarily conserving wetlands. But by listening to the lobbying of the lowest common denominator in the oilsands industry, the Alberta government has set the bar to the level of the worst performers, not the best.

Enforcement order issued to protect hawk habitat

FROM AN ALBERTA GOVERNMENT MEDIA RELEASE, SEPTEMBER 19, 2013

The Alberta government has ordered an energy company to stop operating an oil well near Suffield and reclaim the site due to violations under the *Public Lands Act*. Crew Energy Inc. had constructed an active oil well in contravention of regulated setback limits that protect Ferruginous Hawk populations. Provincial legislation prohibits high-risk developments within 1,000 metres of active nests to minimize danger to the birds and their offspring.

Alberta's Enhanced Approval Process requires all companies

to complete a wildlife survey prior to development — in this case, the survey was not comprehensive enough and did not identify the hawk nest on the site. Thus, through the Enforcement Order, the company's Mineral Surface Lease at the site is cancelled. As well, the company must submit a plan to Environment and Sustainable Resource Development to restore the site to its original condition and submit a final report when reclamation has been successfully completed.

Enforcement orders ensure that immediate action is taken to remedy a situation when it threatens the environment.

Federal Government Moves on Protecting Greater Sage-Grouse

The Federal Government appears to have finally made a positive step in the right direction on the protection for the Greater Sage-Grouse. The Honourable Leona Aglukkaq, Minister of the Environment, announced Sept 17th the Government's intention to introduce an Emergency Protection Order for the Greater Sage-Grouse in the coming months.

David Ingstrup, regional director for the Canadian Wildlife Service, said the emergency order is intended to address the imminent threats such as noise disturbance and habitat destruction.

"Over the coming months what you'll see is, as we introduce this order, the details in terms of specific restrictions," he said, noting he couldn't say how it will affect oil and gas production. "What I can say is that the order will apply to an area we're estimating to be about 1,200 square kilometres."

Ian Davidson, executive director of the conservation group Nature Canada, said in a statement that he and his colleagues are treating the announcement as a "very positive development" even if some of details are still unknown.

Cliff Wallis, a spokesperson for the Alberta Wilderness Association, said environmentalists are working with the oil and gas industry to clarify the implications. "There may be some areas where they're contained in a very small part of the landscape and activities can continue," he said. "But we would presume a) there would be no new activities and b) that some of their existing structure actually would be unbuilt."

The protection does not extend to private land – a concern that has already been raised. According to a Government news release, the emergency order protects "the Sage-Grouse and its habitat on provincial and federal crown lands in Alberta and Saskatchewan [but] with no restrictions on activities on private land, nor on grazing on provincial or federal crown lands."

Though the issue is far from over, thanks goes to all those who worked so hard on it, and who participated in the Ecojustice lawsuit; groups involved were the Grasslands Naturalists (a Nature Alberta Corporate Club), Nature Saskatchewan, the Alberta Wilderness Association and the Wilderness Committee.

THINKSTOCK.COM

NCC Strikes Deal with Waldron Ranch

The Nature Conservancy of Canada (NCC) has struck a deal with the Waldron Grazing Cooperative to place a conservation easement on over 12,350 hectares of excellent rough fescue grassland. The conservation easement on the ranch, which is about 175 km southwest of Calgary, will be the largest of its kind in Canada.

The easement means that, though ownership can change, the land itself will permanently remain uncultivated, undeveloped and un-subdivided. The grazing co-op will continue ranching operations just as it always has. The only industrial activity that can occur is gas drilling; though there are no oil or gas wells presently, landowners in Alberta, for the most part, have no real say in drilling on their land.

In a Sept 12, 2013 article by Kelly Cryderman in the *Globe & Mail*, rancher Tim Nelson said: "we don't really want [the easement] 100 percent. But we want it to preserve the land...We don't know about the next generation. And we're worried. What happens in 20, 30, 40, 50 years, and they start developing it?" Given the land's value (approximately \$75 million) and its proximity to Calgary, future development would almost certainly be in the cards without the easement.

Kudos go out to both NCC and the Waldron Grazing Cooperative for working together to preserve this ecologically important ranchland.



BOOK REVIEWS

Save the Last Dance: A Story of North American Grassland Grouse

A new book by award-winning photographer, Noppadol Paothong, and noted outdoor writer, Joel M. Vance, strives to rescue grassland grouse from the brink of extinction by showing the world what it stands to lose if these species are allowed to disappear forever.

This 204-page hardbound book, *Save the Last Dance – A Story of North American Grassland Grouse*, captures the dazzling beauty of seven grouse species whose populations are diminishing across the prairies and plains of America – and one species that has already lost its battle for survival.

Fortunately, many conservation groups have championed the cause of grassland grouse. But will it be

too little, too late? The birds can be saved if enough people care. The book fosters knowledge and understanding of these spectacular birds and their diminishing habitats so future generations, too, can marvel at their grace and beauty.

The book covers the following species: Heath Hen, Greater Prairie-Chicken, Lesser Prairie-Chicken, Attwater's Prairie-Chicken, Greater Sage-Grouse, Gunnison Sage-Grouse, and Sharp-tailed Grouse, along with conservation efforts to save these species.

Photography, Preface and Field Notes are by Noppadol Paothong, an award-winning nature/



conservation photographer. His focus has been on rare and endangered species, and for the past 11 years he has worked primarily on grassland grouse and their fragile habitat.

Joel Vance worked for 22 years as an award-winning news and magazine writer for the Missouri Department of Conservation. He has been awarded all three of the top honors bestowed by the Outdoor Writers Association of America — one of only three members in the history of the organization to be so honored.

The Stokes Field Guide to Birds: Western Region and Eastern Region

Two new bird field guides (one for Western Region, and one for Eastern Region), by Donald and Lillian Stokes, are now available. For a good review of them, see Charlotte Wasyluk's blog, prairiebirder.



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BOOK REVIEW

The War on Science: Muzzled Scientists and Wilful Blindness in Stephen Harper's Canada

In this arresting and passionately argued indictment, award-winning journalist Chris Turner argues that Stephen Harper's attack on basic science, science communication, environmental regulations, and the environmental NGO community is the most vicious assault ever waged by a Canadian government on the fundamental principles of the Enlightenment. From the closure of Arctic research stations as oil drilling begins in the High Arctic to slashed research budgets in agriculture, dramatic changes to the nation's fisheries policy, and the muzzling of government scientists, Harper's government has effectively dismantled Canada's long-standing scientific tradition.

Drawing on interviews with scientists whose work has been halted by budget cuts and their colleagues in an NGO community

increasingly treated as an enemy of the state, *The War on Science* paints a vivid and damning portrait of a government that has abandoned environmental stewardship and severed a national commitment to the objective truth of basic science as old as Canada itself.

"A blunt and evidence-based account of Harper's extreme ideological assault on science, reason and Canada's international reputation. Essential reading for all Canadians." —Andrew Nikiforuk

"A New Canada is emerging, one in which unwelcome evidence is suppressed, dissenters are ostracized and ideology trumps rational thought. ...the only thing more alarming than the speed with which it's happening

"An urgent book that anyone who cares about Canada—the idea, the nation, the democracy—should read." JOHN VAILLANT

The **WAR** on Science

Muzzled Scientists and Wilful Blindness
in STEPHEN HARPER'S Canada

CHRIS TURNER

By Chris Turner. CDN \$19.95 (PBK)

is the passivity with which it's being allowed."—John Vaillant
(Author of the award-winning books *The Golden Spruce* and *The Tiger*).

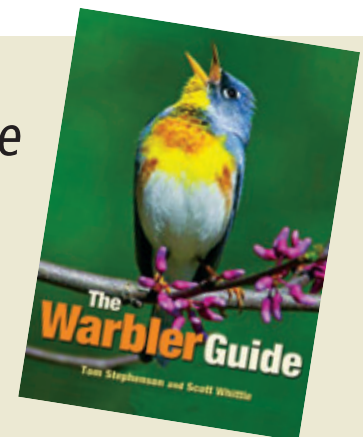
You can buy the ebook edition of this title from: Amazon; Kindle; iBooks; and kobo.

Website Companion to the Book, *Warbler Guide*

BY MARTIN SHARP (EDMONTON)

Anyone who has bought a copy of the new *Warbler Guide* (reviewed in the Summer 2013 edition of *Nature Alberta*) may be interested in the website related to the book. Actually the site is pretty helpful even if you don't have the book! Go to: www.thewarblerguide.com.

It includes a digital song guide to go with the sonograms in the book and a set of really useful printable "Quick-finder" pages that give you collections of undertail patterns, head patterns, side views and oblique views of all the North American species. Plus lots of excellent photos, advice on how to use the book, etc. Definitely worth a look if you have a passion for warblers.





Nature Alberta NEWS

Grasslands Naturalists takes on Baby's Breath!

BY JOHN SLATER AND HUGH ARMSTRONG

Last year, a project was initiated to remove the tall variety of Baby's Breath (*Gypsophila paniculata* L) from Police Point Park in Medicine Hat. It occurred mainly along the eastern side of the Park adjacent to the Medicine Hat Golf Course as well as along the trail leading to the west entrance of the park and along the steep river bank near the main entrance road, Police Point Drive.

This invasive plant is on Alberta's list of noxious weeds. It is an extremely hardy perennial that spreads primarily by seeds, often as a tumbleweed. New seedling plants emerge in spring and develop only one shoot the first year. Root growth during the first two years is rapid. Plants do not flower until the third year. Roots are stout and may extend a meter or more into the soil allowing plants to tap into deep soil moisture and store large food reserves. In southern Alberta, invasion by tall Baby's Breath poses a risk to rare plant species such as Tiny Cryptantha (*Cryptantha minima*) and Western Spiderwort (*Tradescantia occidentalis*). Tall Baby's Breath tolerates considerable variation in temperature and

moisture. Habitats include cultivated fields and pastures, native prairie, roadsides and river banks.

An article on the project to remove the Baby's Breath from Police Point Park was printed in the September 2012 issue of Grasslands Naturalists' newsletter, the Sagebrush Chronicle (Vol. 24 No. 7, page 7). In summary, four methods were applied to remove the plant seeds and attempt to kill the root. First, the plant stems were cut about 5 to 10 cm above the ground surface, which would simulate cutting or mowing. Next, the same procedure as described above was conducted but then liquid herbicide (DICAMBA & 2, 4-D Amine 600) supplied by the City of Medicine

Hat Parks Department was applied to the cut stems using a 1 inch paint sponge.

The third technique involved using a regular garden shovel to dig and cut the roots about 10 to 15 cm below the plant crown. The fourth technique again involved using a shovel to dig and cut the root, but in this case, the same liquid herbicide was painted on the remaining cut root, some of which were covered with the soil and others were left exposed. In all cases, as instructed by the Parks Department, the plants removed were bagged and disposed as city garbage.

Observations were made during the summer of 2012 to gather results of the four methods. As generally expected, the first technique of just cutting the stems caused most of the plants (all but one) to re-sprout, flower and produce seeds.



**A GROUP OF BABY'S BREATH INVADING THE GRASSES
ALONG THE SOUTH SASKATCHEWAN RIVER.**

These plants were cut again but then herbicide was applied to the stems. Application of herbicide caused the stems to turn brown within a few days to a week. The question was, would the herbicide on the stems be sufficient to kill the root? The third and fourth techniques whereby the root was severed raise the same question as to whether the plant would survive to re-sprout another year.

The observations this year in 2013 revealed that the first method of just cutting the stems and the third method of cutting the root only 10 to 15 cm below the plant crown were insufficient to kill the plants. In these cases, a sturdier shovel was now used to dig down at least 30 cm and sever the root. About 300 plants were dug. Other information available states that when the roots are cut at this greater depth, it should be sufficient to stop re-growth. Furthermore, the application of the herbicide to either the stems or to the remaining root should prevent any new growth.

Many new small plants were observed this spring – because the grass was still short, and perhaps more seeds germinated due to

the cooler, wetter spring conditions. Also, in July and September, thirty four larger flowering plants were found. Their stems were cut and herbicide applied. The question remains whether the herbicide has permanently killed the plant root? Only time will tell! Continued observations are planned over the next few years.

A side note: This spring, Sean Allen organized and managed a project to remove Baby's Breath from the subdivision Ranchlands Phase 2F&G (north of Police Point Park) with the help of volunteers from Calfrac Well Services Ltd to dig the plants. The success of the project was reported by Jenna MacDonald in our June Sagebrush Chronicle (Vol. 25, No. 6, page 8). (If you would like a copy of the June or September articles, contact your Editor at na@naturealberta.ca.)

Grasslands Naturalists' website is www.natureline.info/gn.



Baby's Breath, native to Europe and Asia, was introduced as a garden ornamental in the late 1800's. Used extensively in the floral industry for bouquets, it is now widespread across Canada and the northern United States. Because of its devastating effects on native grasses and forbs, people are urged to simply not grow it! For Baby's Breath found in fresh or dried arrangements, dispose of it securely in landfill-bound garbage. Do not use it for memorial flowers (many infestations have been found downwind from cemeteries). For more information on invasive plants, go to www.invasiveplants.ab.ca.

INTERNS NEEDED

Nature Alberta (NA) is hiring part-time student **Bird Conservation interns**.

If you are a continuing post-secondary student in Alberta, have a love of nature, and are looking for relevant work experience, send us your resume!

We are hiring multiple positions province-wide, for work in our bird conservation program. No experience necessary, but must

have an interest in conservation and a willingness to work outdoors in variable conditions. Most positions require some field work, either within provincial parks or other rural sites. You must have a class 5 driver's licence and access to a vehicle, as these positions will require travel

within Alberta. Hours are part-time and very flexible.

This is a fun and easy way to add important experience to your resume, increase your knowledge of Alberta's wildlife, and be more competitive in the job market. Please email resumes to birds@naturealberta.ca.

President's Report

BY TED HINDMARCH

(The following is a summary of the President's report to the Board of Directors at the Oct 5, 2013 meeting at the Nature Alberta office in Edmonton.)

Since we last met, I expect that you will all have been busy over the summer with home club activities and family and holiday recreation. Now that fall is here and winter is approaching, we must return our thoughts to board governance and Nature Alberta's activities in the coming year. I solicit your enthusiastic engagement in those efforts.

Our agenda for the fall meeting reflects our requirement to provide the necessary guidance to Nature Alberta staff in meeting our objectives for both the coming year, and for our 3 year plan. As a board we must also guide our individual teams on what we feel each should be working to accomplish in the coming year. Financing Nature Alberta work continues to remain a challenge, especially with cutback in government core operational grant funds and student employment support.

I wish to thank our Nature Alberta staff for their hard work and success in delivering our core programs throughout the summer. Even as reports are being completed for grant work completed in 2013, remnant project staff are engaged in plans and preparations to seek funding for the work we hope to accomplish in 2014 – which we will be going over in our operational and strategic plan. Board engagement and

involvement in the way ahead is essential.

Office staffing with just our one part time Executive Director in the office remains less than ideal. The addition of a book-keeper one day a week certainly helps. Financing for additional staff, however, continues to remain the show-stopper. We must continue to look to how we can get our finances in shape to have a full time office management presence. With the summer over, Petra's input and experiences over the past 2 years, along with Christine Brown's background as staff and with some of the lessons learned, we need to re-look at how we can manage the running of the office and provide secretariat support to the board and the committees.

Surveys on both Board effectiveness and of our member clubs' activities/expectations have been completed and result reports distributed. We thank those that responded to the survey; however, some surveys provided no comments to clarify the result indicated. Nevertheless, they do give us some areas to aim at in improving our effectiveness as a board and an organization.

For the Board performance survey a few areas stand-out that we need to discuss at this meeting and work on over the coming months. Please review the results and give some thought to solutions prior to the meeting.

These points received the lowest overall satisfaction ratings:

- Given its unique structure, do you think the Board has an appropriate balance of skills, experiences and capacity to direct the business of Nature Alberta effectively?
- Do you think the Board receives adequate briefings on the operational risks of the organization, and on its systems for identifying, managing and monitoring such risks?
- Do you think board meetings provide enough time for the Board to provide advice and counsel to Management, other staff and Team Chairs on operational activities?
- Do you think the Board has established appropriate and clear benchmarks for performance against which strategic, human resources, operating and financial plans can be measured?
- Are you satisfied with how the Board monitors performance across all of its responsibilities, e.g. operations, finances and human resources?

I look forward to continuing to work as part of the Nature Alberta board; however, the effort can become very intensive if the workload is not leveled across the board. I am hopeful that the teams will come together to share the operational load across the full board spectrum.

ADDENDUM: Nature Alberta is continuing to review future insurance coverage options and will be in further contact with our clubs with regard to this. Regarding Issues Management, consensus of a revised Nature Alberta process has not yet been reached, but should be in place by the end of year.

Living by Water Report

BY LAURA M. EDWARDS

(The following is a summary of the report to the Oct 5th Board of Directors meeting.)

This summer, the Living by Water Project (LBW) operated at 17 participant lakes: Pigeon Lake, Sylvan Lake, Clear Lake, Pine Lake, Wizard Lake, Crimson Lake, Lake Isle, Island Lake, Gull Lake, Ghost Lake, Little Beaver Lake, Lac St. Anne, Spring Lake, Sandy Lake, Moose Lake, Lac La Biche, and Driedmeat Lake.

A total of 119 homesite consultations were completed at 14 of the participating lakes from June-August: Pigeon Lake (58 consultations), Sylvan Lake (30), Clear Lake (7), Pine Lake (5), Wizard Lake (3), Crimson Lake (3), Lake Isle (3), Island Lake (2), Gull Lake (2), Ghost Lake (2), Little Beaver Lake (1), Lac St. Anne (1), Spring Lake (1), and Sandy Lake (1). Of these, 100 were initial consultations and 19 were follow up consultations from 2009 and 2011.

LBW attended several outreach events and community workshops to promote the homesite consultation program and foster connections with other programs operating in Alberta (staff person in brackets):

Lac La Biche Environment Fair June 8 (Dana); Wizard Lake Shoreline Management Presentation June 8 (Brienne); Birchcliff Sylvan Lake AGM June 15 (Dana); Pine Lake Education Day June 15 (Dana); Master Naturalist Outreach Night

June 20 (Brienne); River Watch Collaboration Day July 3 (all LBW Staff); Moose Lake July 6 (Dana); Wizard Lake July 13 (Dana); Project WET Workshop July 17 (Laura and Brienne); Pigeon Lake Walk and Talk July 28 (Laura and Rob); Sylvan Lake Beach Day July 31 (Dana); Gull Lake Centennial Celebration August 3 (Brienne); Driedmeat Lake August 9 (Rob); Clear Lake AGM August 10 (Dana); Pigeon Lake AGM August 24 (Rob); Farmer Markets June 28th and July 5th (Laura and Rob).

LBW is working to bring back the Urban Lakes project in the Edmonton Region. As well, LBW is working with Vanessa Higgins from Strathcona County to

bring the Living by Water project to residents living near wetland and storm retention ponds in Sherwood Park. We anticipate involving 20 residents next summer.

Next year, LBW will continue to offer homesite consultations at participant lakes and hopes to involve new lakes where residents have expressed interest, including Crane Lake, Driedmeat Lake, and Lac Sante. We will also be offering urban lake consultations in Sherwood Park. Given the success of the program in the past two summers we will likely be able to employ 3-4 summer students again next summer and complete another 100-130 consultations.

IBA: Going Forward – Plans for 2013-14

BY ERIN CAMPBELL

(Erin delivered a detailed report to the Board of Directors at the Oct 5 meeting which is available upon request. Below is a brief note on the plans for 2013-14.)

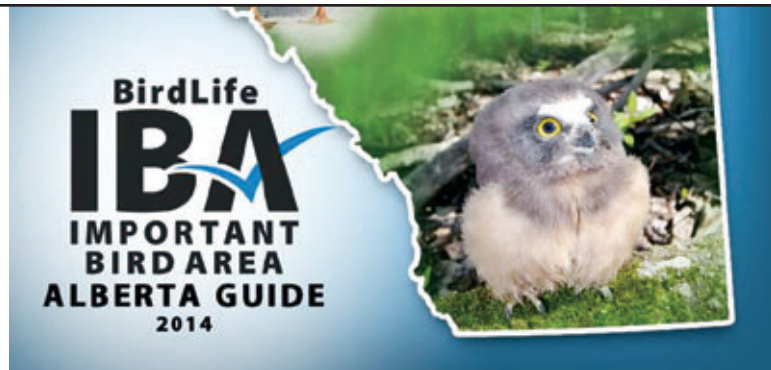
With outcomes clearly defined and funding secured, Nature Alberta is looking forward to growing its Bird Conservation program in 2013-14. Much of the summer focus will be on reinvigorating awareness of the Important Bird Areas (IBA) program by developing an IBA guide and improving the IBA monitoring protocol. With new materials in hand, Nature Alberta staff will then focus

on getting out in front of as many audiences as they can, promoting a message of the importance of bird biodiversity, bird conservation, bird habitat, etc. Stay tuned! For further info, see the Nature Alberta website: www.naturealberta.ca: "Bird Conservation" under "Programs".

Free Guide to Alberta's Important Bird Areas

In 2013, Nature Alberta celebrates 15 years of promoting the Important Bird Area (IBA) program in the province. We hope you will join the celebration by learning more about Alberta's IBAs and the birds that call them home!

To commemorate this 15 year anniversary, Nature Alberta's Bird Conservation Program has created a beautiful, full color, 60 page guide to Alberta's IBAs. This guide, which is free, will take you on a journey to 43 IBAs spread across Alberta's natural regions.



These sites are recognized as globally, internationally and nationally significant for large congregations of migratory waterfowl and shorebirds or critical habitat for bird species at risk. More than 90% of Alberta's birds migrate each year making bird conservation an international issue. We can do our part by making sure important bird habitat is protected in Alberta.

The printed free guide is available now from Nature Alberta directly, but will be distributed throughout the province.

This project was only possible through the financial and in-kind support from Nature Canada, Alberta Conservation Association, Bird Studies Canada, Birdlife International and the Government of Canada. Thank you!

Young Naturalists Club is Growing!

Children and youth experience an innate connection to nature. This is witnessed in a child's natural ability and desire to explore the wilderness for hours. Both the physical and psychological health of a child can be benefitted by regular time spent in nature. All too often, however, our busy schedules leave little time for parents and children to explore the natural world. That's where the Young Naturalists Club of Alberta (YNC) comes in!

The YNC program, and by extension Nature Alberta, strives to increase Albertans' exposure to, knowledge and appreciation of local natural areas. To this end, YNC's provincial coordinators and local leaders work together to present interactive and fun nature activities for families of all ages. One facet of this goal is the Explorer Day series: monthly

outings designed to be a social experience for children and their adult guardians. YNC Alberta strives to provide its members with regular, local programming.

This season we are closer than ever to reaching this goal, as new clubs are being launched in St. Paul, Morinville, Bonnyville, Cold Lake and Camrose. These clubs will operate in addition to those

underway in Edmonton and Red Deer. In order to welcome new members in their areas, Explorer Days in Bonnyville, Cold Lake, St. Paul, Morinville and Camrose will be free and open to any interested member of the public until further notice.

For more information, contact Candace: ync@naturealberta.ca. Likewise, if you wish to help with the development of a YNC club in your area please contact Candace.



Nature Alberta staff

BY PETRA ROWELL

Many thanks to Vid Bijelic for assuming the role this summer of acting Executive Director (ED) and keeping everything operating smoothly while I was on leave/holidays. Vid has now returned to school and will be reducing his hours at Nature Alberta.

Thanks also to all our Program Managers and summer staff for another great summer of events! You can follow our activities via our website (under "What's New") and Facebook pages.

Going forward into September, please note that as well as myself, the following staff/contractors

are continuing on part-time in the following positions:

- Living by Water Program Coordinator - Laura Edwards
- YNC Program Coordinators - Kelsie Sharun and Candace Farrar
- Bird Conservation Program Coordinator - Erin Campbell
- Citizen Science Program Coordinator / IT Manager - Vid Bijelic
- Book-keeping Support - Janet Melnychuk
- Communications/Education & Outreach Support - Cheyenne Lemery

Casino Time

Nature Alberta has a casino fundraiser coming up on Monday December 30th and Tuesday December 31st. The revenue generated from our casino funds our Education and Outreach. This includes funds for our successful programs: Young Naturalists, Living by Water, and Bird Conservation. It also helps us maintain our communications tools including our long published magazine, *Nature Alberta*, as well as our new and growing online resources, vital in our continuing outreach to Albertans about our Natural Heritage.

The casino will be at Yellowhead Casino in Edmonton and we are eagerly looking for volunteers. Please share this opportunity with those Nature Alberta members and clubs that are Albertabird subscribers. With your help we will draw 2013 to a close by ensuring Nature Alberta can continue its work in the New Year.

If you or anyone you know is interested, Christine Brown, our Treasurer and coordinator, can be contacted through info@naturealberta.ca or at 780-953-2085.

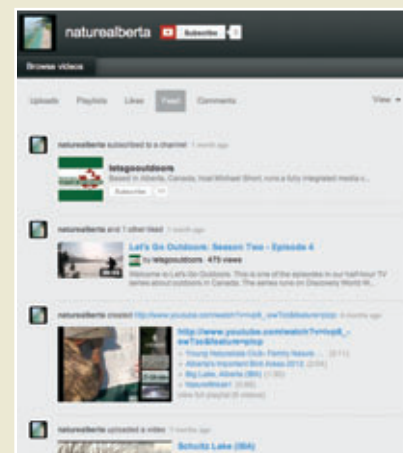
Director Changes

Lac La Biche Birding Society – a Nature Alberta Corporate Club – has a new elected Board Representative: Jennifer Okrainec, current President of the Society. They are seeking a replacement for Ted Johnson who has served on our Board since 2005. We sincerely thank Ted for his many years of service to Nature Alberta.

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



Advertising in *Nature Alberta*

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

Full details, including rates and sizes, are available at:
online: www.naturealberta.ca
email: na@naturealberta.ca
phone: (780) 427 – 8124



JOHN WARDEN

Close to Home: Nature Photography in Alberta

Feed Them on Your Dreams

BY JOHN WARDEN

"What can we do to make a difference?"

That was the question coming from the floor at the 'Thinking Mountains' conference last December in Edmonton. The speaker, who had raised the issues of corporate environmental degradation, oil spills and mercury contamination, paused for a moment and then replied that he didn't think that there was very much that we could do, other than to vote for the people in government who will effect change.

The conference was part of the University of Alberta's Canadian Mountain Studies Initiative and the audience was made up of students, faculty and members of the public who were interested in the mountain environment. The question was a fair one. These were the very people who could and wanted to make a difference. The answer though, voting for people who will lead change through good government, seemed to me, inadequate. It made me

feel squirmy and uncomfortable. Sitting in the audience, I didn't have a better answer then, so I said nothing. Yet it got me thinking. How could it be that I didn't have a ready answer to such a simple question? Could it be that the answer isn't so simple?

I started looking for answers and came across the story that's attributed to Loren Eiseley:

While wandering a deserted beach at dawn, stagnant in my work, I saw a man in the distance bending and throwing as he walked the endless stretch toward me. As he came near, I could see that he was throwing starfish, abandoned on the sand by the tide, back into the sea. When he was close enough I asked him why he was working so hard at this strange task. He said that the sun would dry the starfish and they would die. I said to him that I thought he was foolish. There were thousands of starfish on miles and miles of beach. One man alone could never make a difference. He

smiled as he picked up the next starfish. Hurling it far into the sea he said, "It makes a difference for this one." I abandoned my writing and spent the morning throwing starfish.

One person can make a difference and, through their actions, lead others to effect change. That's certainly part of the answer.

Then I came across a video titled 'Recreating Eden, Garden of the Gods'¹, featuring Freeman Patterson. I've come to think of Freeman Patterson as an old friend, though I've only met him once at one of his photography workshops back in the 70's. Freeman is an iconic Canadian nature photographer and his work and his words have mentored my nature photography journey for over 40 years. In the video he talks of how it was his mother who taught him the importance of hearing the wind rustle through the grass. From that beginning came his love of gardening and nature and nature photography. Freeman's words reminded me of the article I wrote about my Grandmother for the Nature Alberta audience, an article titled "Of Grandmas and Bighorn Sheep" [Feature story: Vol 38, #2, Summer 2008]. Mothers



¹ www.recreatingeden.com



"I TOOK OUR THREE YEAR OLD GRANDDAUGHTER MADELEINE FOR A WALK ALONG THE SHORE..." JOHN WARDEN

and Grandmothers and learning from our elders. Thoughts and ideas were beginning to percolate. It took a few more months though, before I remembered the Crosby, Stills and Nash song, "Teach Your Children"².

*Teach, your children well,
Their father's bell did slowly go by,
And feed them on your dreams,
The one they picked, the one
you'll know by.*

The song, with lyrics by Graham Nash, became a counter-culture anthem of the 70's when the issue

was the Vietnam War. Forty years later, while we're still sending young people off to war, we also face the issues of climate change and environmental degradation. Nash's song lyrics, like the album it was part of – "Déjà vu" – come back to us fresh and poignant. Teach your children well and feed them on your dreams.

Individual actions, learning from our elders and teaching our children are then all pieces of the 'what can we do to make a difference' puzzle. The words and ideas of Eiseley, Patterson and Nash came together to frame the answers I was looking for.

And they're things I've already been doing.

At a family barbecue this past summer, our grandson Noah and I explored the bulrushes and reeds around the pond at the back of our home. We watched the ducks paddling about in the water and then we blew dandelion fluffs into the air. Noah and I both laughed and giggled with delight. Noah's only two and a half, but somehow I think, or I hope that he'll remember dandelion fluffs as he grows older.

Then, this past September, I took our three year old granddaughter Madeleine for a walk along the shore at Sooke, B.C. We found purple and orange starfish and she was fascinated.

² Déjà Vu, Atlantic Records, 1970.



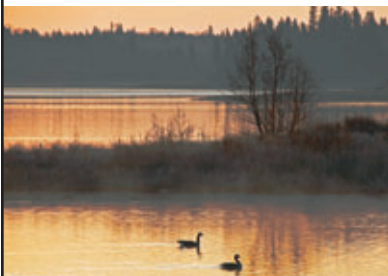
"EXPLORING THE BULRUSHES AND REEDS AROUND THE POND AT THE BACK OF OUR HOME." JOHN WARDEN

Together we were able to put a beached starfish back into the water. At the very least, it made a difference for that one, and for us. Then I took her out canoeing and we saw jelly fish and seals and otters. The migrating salmon were jumping all around our canoe and it was wonderful. Next year, our other two grandchildren, Grayson and Emma, will be old enough to go exploring and so I may also have the honour of showing them bits of the wild and of "teaching them well".

The genius of the song 'Teach your Children' though, comes in the last two verses when Nash flips the lyrics and advises the children – 'you of tender years' – teach your parents well and in turn, feed them on your dreams. Thinking about those words was a light bulb moment for me! Maybe that was the opportunity that was missed at the Mountain Studies conference. Could the question have been turned back to the audience, asking them what their dreams were, what

they thought the answers might be, how they thought they could make a difference?

How can we make a difference? The answer isn't a simple one and it isn't any one thing. Voting for someone to represent our interests in government is part of the answer, but we can act on our own and we can show others. We can teach our children and, if we're wise, we will listen to their dreams.



John Warden has updated his website: www.jwardenphotography.com. You will definitely enjoy the new look and all the photographs. Plus, also on the site are his past Nature Alberta articles. It is definitely worth a visit for excellent photos of wildlife and landscapes in Alberta and beyond. You can also check out his articles on his blog (<http://jwardenphotography.blogspot.com/>).

www.jwardenphotography.com



AKAYO'KAKI A'PAWAAWAHKAA

BY RYAN HEAVY HEAD; SIKOOHKOTOKI, KAINAISSKSAHKOYI

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

AWAKAASIIKI'SOMM SEPT 28, 2013

It seems my muse for fieldnote writing has departed. I haven't encountered her for a while, and I've no idea whether or not she'll return. For now though, I thought it might be best to take an alternate approach, so that I don't miss out on opportunities to record and share observations in my ongoing phenological studies. So at the full moon of Awakaasiiki'somm, I got started, using a video-recorder to capture my experiences at Sspopiikimi. We'll see how this new approach goes. It might turn out to be better than writing in the long run. [Video at: <http://akayokaki.blogspot.com>.]

During my first visit, following our first cold storm, which arrived at the full moon, there were still quite a few of the late asters - Tufted White Prairie Aster, Hairy Golden Aster, and Showy Aster being the most prominent three. The flicker families were still here at that time too.

Given the cold shot we'd had, I noticed the turtles had already gone under at the pond. I knew the Rattlesnakes would be going back to their hibernacula as well. One of the developments that occurred in my life this summer was that I inherited the lead position for coordinating and carrying-out Rattlesnake conservation and mitigation in the city of Lethbridge. In the course of that work, I'd taken in an injured

Rattlesnake, named Rupert, who had been hit by a mountain bike, and had required surgery. Though healed from the operation, there was still signs that Rupert was suffering some internal injuries. All the same, I thought it best he go back to his hibernaculum for winter. [Check out Ryan's blog for a video of the release: <http://akayokaki.blogspot.com>.]

Finally, I made another visit to Sspopiikimi after about a week of chill. This time, I found almost all the asters, with exception of a few Hairy Golden holdouts, gone. The flickers too had departed. But there were still lingering dragonflies, grasshoppers, and drone flies. [Check out Ryan's blog for a video of the drone flies at the remaining asters: <http://akayokaki.blogspot.com>.]

Ryan Heavy Head and his wife Adrienne are caretakers of a Beaver Bundle for the Blood Tribe of southern Alberta. He works as the coordinator of Kainai Studies at Red Crow College, on the Blood Reserve, where he teaches field courses in phenology and traditional foods. To read about Ryan's past walks through ecology and watch his videos, go to <http://akayokaki.blogspot.com>.

PROJECT FEEDERWATCH NEEDS YOUR HELP!

At regular intervals from November to April, thousands of FeederWatchers count the kinds and numbers of birds at their feeders, then submit their observations to us. This information helps scientists study winter bird populations.

Project FeederWatch participants receive a full-colour bird poster and calendar, a FeederWatch Handbook and Instruction Book, access to the data entry portion of the FeederWatch website, and the chance to contribute to a continent-wide bird research project.

Project FeederWatch is a joint program of Bird Studies Canada and the Cornell Lab of Ornithology. In Canada, you must be a member of Bird Studies Canada (BSC) to participate. BSC membership benefits include a subscription to our bi-weekly *Latest News* e-newsletter, four issues a year of *BirdWatch Canada* magazine, free participation in any of our volunteer programs, and a charitable tax receipt for the full amount of your membership.

Contact Information:

Project FeederWatch
Bird Studies Canada
P.O. Box 160,
115 Front Street
Port Rowan, ON N0E 1M0
1-888-448-2473 / 519-586-3531
Email: pfw@birdscanada.org

www.bsc-eoc.org/volunteer/pfw/



Eyes on IBAs

Ninth in a Series

Spotlight on Lake Newell & Kitsim Reservoir

BY ERIN CAMPBELL

On my way back from visiting family in Medicine Hat this summer, I visited the Lake Newell and Kitsim Reservoir Important Bird Area (IBA).

Just outside of Brooks, a large part of the IBA is enclosed within Kinbrook Island Provincial Park, making it easily accessible. Despite oil and gas activity in the area, bird populations such as American White Pelican (*Pelecanus erythrorhynchos*) and Ring-billed Gull (*Larus delawarensis*) thrive here during the breeding season, and I was hoping to see some up close.

The reservoir area, adjacent to the lake, seemed quiet at first as I drove up. It was hot and muggy out, and the only birds I was able to see were some Blue-winged Teal (*Anas discors*) passing by overhead, and the odd Ring-billed Gull. It was strangely quiet, and I began to feel like my attempt at birdwatching that day was going to be a bust. But just as I was about to turn around

and head towards Lake Newell, I heard a call I was unfamiliar with. Quickly I scanned the area, and I noticed for the first time a small white head with a mask not unlike Zorro's, and a long, pointy black beak peeking out at me from behind some bulrush. I had never seen a Black-necked Stilt (*Himantopus mexicanus*) in the wild before, but any uncertainty I had in my ID dissolved as two gangly, impossibly long-legged birds burst out from behind the reeds squawking at a juvenile Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*) that had evidently ventured too close to their nest.

**AN ADULT MALE YELLOW-HEADED BLACKBIRD
AT LAKE NEWELL. ERIN CAMPBELL**

Erin is Nature Alberta's Bird Conservation Program Coordinator. In this story, she shares her recent birding experience at one of Alberta's Important Bird Areas (IBA).



ENTRANCE TO KINBROOK ISLAND PROVINCIAL PARK





A LESSER YELLOWLEGS AT KITSIM RESERVOIR. ERIN CAMPBELL

To see these birds in action is, at the same time, entirely comical and also strangely mesmerizing. Many bird species have a grace and fluidity to their movements. The small Eared Grebes (*Podiceps nigricollis*) and the swooping Yellow-headed Blackbird juveniles nearby certainly had a grace to them. But the Stilts did not. They were all bright orange legs and chaos in an otherwise peaceful setting.

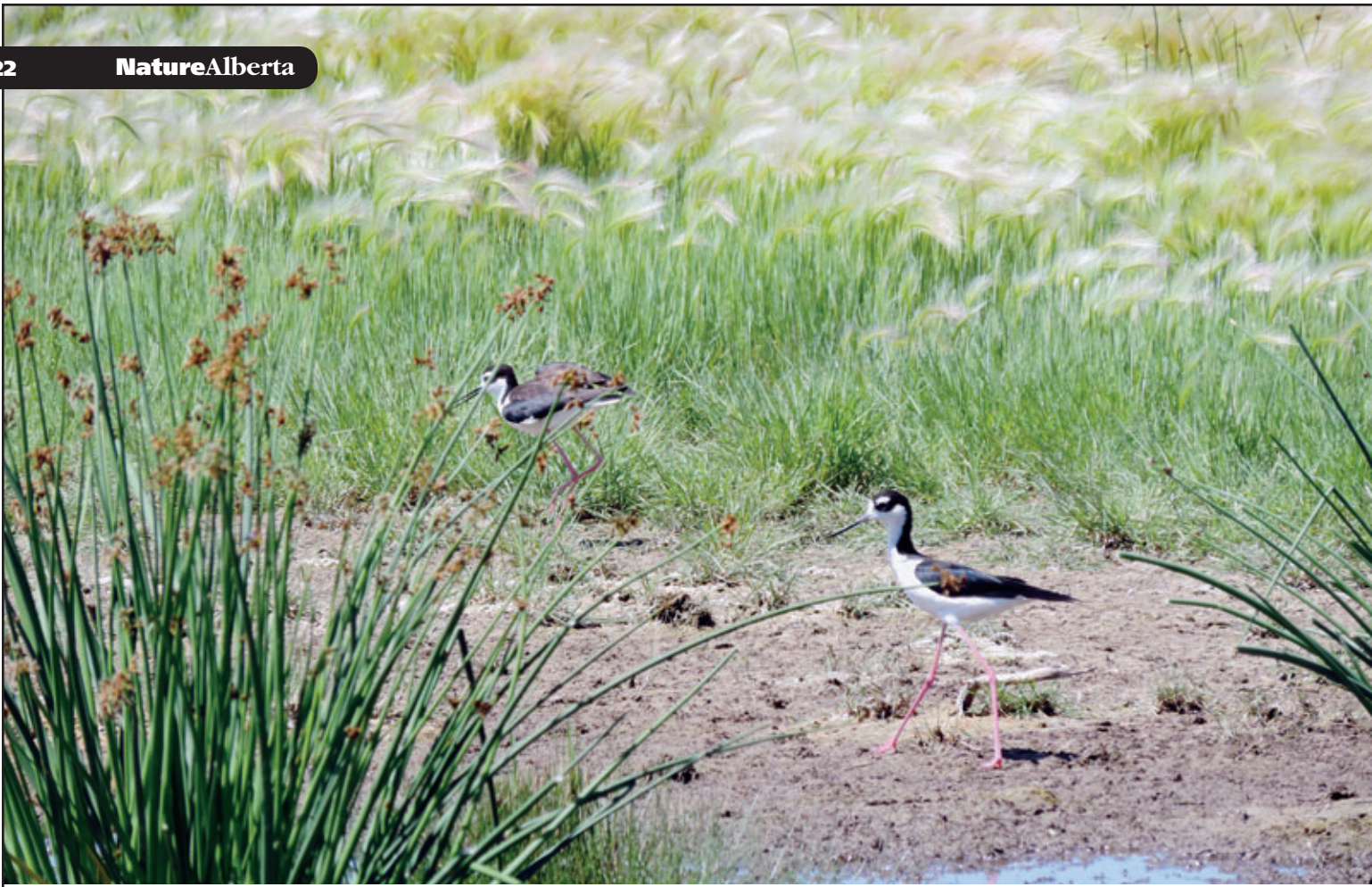
Just past them a Lesser Yellowlegs (*Tringa flavipes*) stood on the edge of the road, and it was only in my

pursuit of a photograph that I noticed it was not alone.

Right beside it, impossibly camouflaged, were four Kildeer (*Charadrius vociferus*), all observing the manic Stilts. As I got closer to them, they turned and ran, their short legs carrying them quickly across the dirt road and into the neighbouring marshes.

The Yellow-headed Blackbirds seemed to grow tired of antagonizing the Stilts, and they all took flight together and headed away overtop a thick stand of shrubs. I followed behind them

eventually finding myself on the edge of Lake Newell. It was quiet there too, except for the sound of the lapping water and the quiet call of the many swallows that had made homes in the shrubs and trees along the bank. There were Yellow-headed and Red-winged Blackbirds (*Agelaius phoeniceus*) here, all straddling the bulrush and swooping at each other. The Yellow-headed Blackbirds ranged in colour from dark brown to vibrant yellow, giving away their ages. Many had large dragonflies in their beaks – the wings of that day's catch glinting in the bright



A PAIR OF BLACK-NECKED STILTS AT KITSIM RESERVOIR. ERIN CAMPBELL

sun before disappearing in a flash.

I continued on, hoping to spot some American White Pelicans out on the water. I scanned with my binoculars, and noticed a solitary Common Loon (*Gavia immer*) on the water, and, off in the distance, stark white feathers against the blue sky. At this distance whatever it was had to be fairly large, and once I saw the birds turn in the

air, the bright orange beaks and gular sacks came into view. Six pelicans settled in the water, far from shore – too far for my camera to get a good shot, but they were there. There are many places in Alberta that we can find American White Pelicans, but they still seem so exotic to me. The white of their feathers bobbed up and down in the distance with

the swell of the water as they rested, far enough away from the water traffic coming from Kinbrook Island Provincial Park.

It was a fitting way to end my visit, echoing the initial calmness of Kitsim Reservoir. Seeing the different species interact with each other really gives you a sense of the community that exists in our IBAs, and it never ceases to amaze me to see how the birds live alongside each other in a dynamic world that we often forget about.

For more information about Nature Alberta's Bird Conservation Program or IBAs, email: birds@naturealberta.ca



AMERICAN AVOCET AND BLACK-NECKED STILT ARE TWO LARGE SHOREBIRD SPECIES IN THE SAME FAMILY, *RECURVIROSTRIDAE*.

LEN PETTITT



In Memoriam

Jim Posey

January 12, 1942 – September 20, 2013

Jim Posey, a long term director for the Alberta Invasive Plants Council and the Alberta Native Plant Council as well as an invaluable Calgary Field Naturalists' Society member for many years, died in Calgary on September 20th, 2013, with his family at his side.

Jim was very passionate about native plants and invasive plants. He had a very long association with the Alberta Native Plant Council (where he developed the "Rogue's Gallery of Invasive Non-native Plants of Alberta") and was the Vice-Chair when he stepped off the Board in March 2013. He was a respected amateur botanist who for seventeen years led weekly field trips for the botany study group of the Calgary Field Naturalists' Society (now called Nature Calgary), and he coordinated their May Species Count for flowering plants. In fact, the Society leaned heavily on him for volunteer help in a wide variety of capacities. His contribution to the Calgary Field Naturalists was invaluable; for his volunteer service in this Society, he received the President's Award as well as the distinction of being a Lifetime Honorary Member.

As a boy, Jim spent his summers at the family cabin in Colorado, hiking and enjoying the mountains. This experience

was one he always treasured and helped to make him into the person that everyone knew and loved. He had a strong love for the natural world, with a special interest in native plants and invasive plants. In his professional life, Jim was a construction specifications writer, and was widely respected and considered an expert in his field. He was a founding member of the Alberta Building Envelope Council, and a scholarship was named by the Council in Jim's honour.

Active as an artist and musician in his earlier life, he continued to express these interests in his photography (including a large collection of wildflower photos), his assistance in sculpture projects, occasional small art projects such as designing a logo for a CSC conference in Calgary which he helped organize (now used by the national organization), and a large and eclectic collection of musical recordings of all periods. He also enjoyed playing some of the keyboard works of J. S. Bach, Bartók, and Eric Satie.

Jim is survived by Eileen Dann, his loving partner of 26 years, daughter Gillian Posey, son Alaric Posey, sister Ann Dion, and many other relatives.

FEATURE ARTICLE

A River Starts in My Backyard: Prairie-fed Rivers

BY LORNE FITCH AND KELSEY SPICER-RAWE, ALBERTA RIPARIAN HABITAT MANAGEMENT SOCIETY (COWS AND FISH)

Greg Brown, a folk artist, has a tune entitled “Out in the Country”. One of the lyrics goes:

*“I’m a little pasture creek, they got no name for me,
I’m a little pasture creek, got no name for me.
When I grow up, I’m gonna be the Mississippi.”*

The point about prairie-fed rivers and their watersheds is they are like the unnamed “pasture creek” in the song – unnoticed, unloved and unappreciated. If a little pasture creek can dream of becoming the Mississippi River, surely we can have a vision of watershed health that crosses boundaries all the way to Lake Winnipeg. A reality for many living in Alberta and across the Prairie Provinces is their water comes from a local, prairie-fed, maybe even a backyard, source.

Prairie rivers could be considered as the Rodney Dangerfields of flowing waters. Most of the ones called “rivers” would be considered creeks elsewhere and the creeks would be a trickle by other criteria. It’s hard to say what a prairie river is – it’s easier to start with

what it isn’t. Many of our rivers have headwaters in the mountains and eventually flow through the prairie, but technically these are not prairie rivers. Where prairie-fed systems start isn’t always obvious. They don’t start from melting glaciers or extensive snowfields. They don’t tumble down steep gradients with a sense of inflated grandeur. They rarely get much respect.

In prairie rivers there is little of the drama, the fanfare between water and rock, because there is so little rock. Rather, it is a process of accommodation with little gradient, hence little horsepower and, most of the time insufficient flow to push around your banks. Henry David Thoreau must have had these rivers in mind when he wrote:

“Men see God in the ripple but not in the miles of still water. Of all of the two-thousand miles that the St. Lawrence flows – pilgrims go only to Niagara.”

Instead of waterfalls and rapids, rocky canyons and thundering white water, prairie rivers meander, controlled often by willow roots and provide a signature of diplomatic restraint. There is a balance of power, a detente of sorts. They gather their force not in headlong rushes but with a steady, pragmatic and business-like insistence. The potential for tourism seems muted.

Occasionally in flood times power momentarily shifts to the river but the valleys, older and wiser than the younger channels that now follow them, allow the water to spread over a wide



MEDICINE RIVER. WEEDEATER/WIKIMEDIA

floodplain stealing the energy of a temporarily exuberant river. These wide valleys that provide a safety valve for floods are the gift of raging glacial grandparents. Like an old couple having lived together for millennia, one waits for the outburst to end and equanimity to reassert itself.

One contention might be the term “headwaters” sounds too grand for river beginnings that are subtle, modest and largely local. The mighty Rosebud River starts from a puddle and unless you follow the channel upstream you might overlook its headwaters. From a small, muskeg lake the Medicine River starts its path to the Red

Deer River. In the middle of the Town of High River, perhaps from beneath the basement of the Baptist Church, rises the start of the Little Bow River. Holy water! Sometimes the start of these rivers is in view of the shining mountains, covered with snow, but is beyond the grasp and influence of those water towers.

It takes a broader, more discerning look to discover the origins of prairie rivers. The origins of these systems are cloaked with disguise, employ stealth and are hiding in plain sight. When you see field runoff from snowmelt or rainfall it represents river

beginnings. Ephemeral wetlands store runoff temporarily; it is attenuated in permanent wetlands with more storage capacity over a longer span of time. All of that water flows, seeps and creeps into thousands of kilometers of small streams, mostly unnamed, unrecognized and unheralded for their role in forming the watershed and transferring water to the named prairie rivers.



LOWER LITTLE BOW RIVER.

AGRICULTURE AND AGRI-FOOD
CANADA

And so, for prairie rivers all of the watershed is headwaters. In particular, headwaters mean wetlands. Wetlands might not have the grandeur of mountains or the age of glaciers, but cumulatively they have the absorptive quality, the storage capacity and the effect of a landscape-scaled sponge. How aware we are of them, how much we understand their function, how we treat them and how many remain functional is a metric, a measuring stick of the health of prairie rivers.

Prairie rivers talk with the land as they wind their leisurely way through it. We might recognize the language in the sinuous letters that are carved in their valleys. At some point or another, prairie rivers flash us a “V” in a victory sign, or a “U”. Dependent on your point of view, or your view point, the meanders are in the form of either an “S” or “Z”. Some like the Battle River are a bit more loquacious with “M”, or “W” and “J”. A very talkative river, the Vermillion, shows us “Q”, “L”, “P” and “T”. You have to work with the river a bit to discern these; the penmanship might need to be excused.

Maybe it's just our presumption that the script is in English. Maybe it's in Arabic or perhaps Sanskrit. It is, after all, river language, not ours and the messages they form are obscure. Patience is required to understand the virtues of these rivers. What can we discern from prairie rivers?

Prairie rivers don't rush anywhere quickly; the water seems confused, in no particular hurry to reach the mouth. For the last word in procrastination, travel a prairie river. The words to describe a prairie river might include languid, unhurried, phlegmatic and even philosophical. From the source of the Battle River to the Saskatchewan border, as the crow flies, is 280 kilometers; it takes the Battle River 678 plodding kilometers to make the trip. The gradient from beginning to end, the drop from source to mouth seems insignificant. The Battle River loses less than 0.5 meters of elevation for every kilometer of distance. This and other prairie systems are not white water rivers.

At times, prairie rivers can be as wide as a politician's promise and then diminish to be as thin as an undertaker's smile. The variability in flow is breathtaking.

For the Battle River the volume of water delivered annually can range from a low of 50,000 to a high of 1,280,000 cubic meters, meaning the wettest year had 25 times more water than the driest. On a dice roll we can have flood or drought. It means we shouldn't be complacent about these systems—they can roar, especially if the wetland sponge has gone missing. A minor obstacle, like an ice dam, coupled with the low gradient can send these rivers into places we thought we owned. These nondescript prairie rivers can



still periodically dictate what is theirs, crossing roads and fields, invading towns and homes and giving new meaning to the thought that flood is the other “f” word.

Lewis Carroll might have called these systems “looking glass” rivers because, over their length, our view of them becomes distorted. Sometimes, in times of little flow when water is barely discernable, there might be less water at the end of the river than it began with. Not always, but after everyone dips their cup into the flow it disappears.

To what degree are droughts, low flow events, or too much water, floods, part of the range of natural variability, or a function of our additive changes to the landscape? From a few isolated pools of water in an otherwise dry river channel to a very wet hayfield it might seem Mother Nature

has a perverse sense of humor. Admittedly, it is hard to grasp the cumulative effects of our roughly 100 years of development and of landscape change. But, the signs are evident and the tools are available to both measure change and predict the future based on current trends. What is equally evident is the variability in our world is increasing and we can expect, should anticipate at times, a combination of too much of a good thing and then too little of an essential element in our lives. Mark Twain wisely said: "Climate is what we expect, weather is what we get."

To come to grips with this, at least conceptually, we should stop looking at prairie rivers as linear features, passing through and by us. One of the marvels of early Wisconsin, so goes early logger stories, was the Round River, a river that flowed into itself, and thus sped around and around in a never-ending circuit. Paul Bunyan, a logger of mythical proportions and of myth, discovered it and the Bunyan tale is of how he floated logs down its waters that were somehow magically connected in a never ending circle. It's not really magic and only partially metaphor to suggest prairie rivers (really all rivers) are like the Round River.

As part of natural cycles and rhythms, we float past our starting point endlessly, reversing the thought that we are simply either upstream or downstream residents. We are in and part of a loop.

If you don't buy into this yet, the roughly 10,000 years of bison occupancy of prairie watersheds represents a past cycle, one of annual migration and of movement of energy with the landscape. This was a significant and driving cultural, ecological and economic influence for native peoples. Early ranching, filling a void left by the extirpation of the bison, continued that cycle, albeit on somewhat different scales and conditions.

We are still subject to natural cycles of drought and it only takes a few days of heavy rains to remind us of lost wetlands, the past ghosts from our development history. What we may not perceive is these wetlands are part of the hydrologic cycle, the biggest loop in being residents of a Round River. Do we alter these cycles; influence the loop of which we are a part? Yes! Wetlands are part of a long term water supply safety net. Removing the storage capacity through drainage, cultivation or infilling inevitably bites us somewhere, sometime in the future.

We engage in the cycle of agriculture, from early pioneering

efforts to today's large scale endeavor. It is the same cycle though, of planting, praying and harvesting. In the process, because the landscape fails to conform to our perceived needs (and the size of our equipment) we interrupt the Round River, severing the loop by cutting off meander bends, simplifying the system through channelization but not realizing that in such complexity is value.

The interruptions in the loop increase with our additive footprint. It could be the linear features of the oil and gas industry. It includes the transportation network that we use extensively but pay little attention to, except for speed limit signs and potholes. In very similar ways, these features interrupt, block, divert or unintentionally speed up flow, changing the cycle of water delivery in terms of timing and quantity.

In ways additive, complex and synergistic we've changed the water quality dynamics of prairie rivers. That includes our wastes, and the assimilative capacity of receiving waters. To that load

**THE SIZE OF THE
RIVER OR CREEK
REALLY DOESN'T
MATTER; IF THERE
IS A GOOD SUPPLY
OF MINNOWS,
THERE WILL OFTEN
BE AMERICAN
WHITE PELICANS.**

SEAN GORDON



we have added the outputs of intensive forms of agriculture as well as the products from broad, extensive agriculture. It leads some people to complain about “pasteurized” water, water running across pastures, especially in spring runoff periods. Much of it comes either as sediment, a product of increased erosion, or the materials that bond to sediment. These changes, a consequence of the footprint of our land use decisions and activities, haven’t been met with appropriate filters and buffers to deal with the increased tide of sediment, nutrients and other chemical additives.

What are some of the measuring sticks to help us assess the health, function and integrity of prairie watersheds? We can turn to wild things— fish and wildlife— to help us. The presence, abundance, distribution and variety of wild species are clues and tell us much about landscape and aquatic health.

Prairie rivers and their valleys are corridors, conduits and connectors for fish and wildlife. Here are found the critical habitats without which many of these species would not survive. There are the big things, like deer that make their year round homes in these habitats and use these river features as travel lanes. Others like the yellow warbler make a cyclic migration of about 8000 km every year from Central and South America to nest either here or in the boreal forest. That migration is a marvel for a bird that perhaps weighs about as much as two quarters, about 8 grams. To accomplish that requires fuel and the fuel is the insect life in these river and riparian corridors. Intact and healthy prairie rivers and wetlands are the 7-11s, the fast food emporiums of the migratory bird world.

Prairie valleys may have been ice carved initially, but since those glacial melt waters disappeared another agent has aided in the maintenance of them. Beavers have been busy storing water for about 10 millennia. They are a

keystone species upon which many others rely, remarkably sometimes us. Without a healthy beaver population many stream

channels would be dry most of the year. The flow of prairie rivers depends, in part, on the stored water in beaver dams whose collective contribution of storage is undervalued.

In the mosaic that was the prairie and parkland, other wild species profited from the mixture of grassland and shrubland. The Sharp-tailed Grouse was one species. It is often worthwhile looking back to see the cornucopia of wildlife that existed— it helps us understand the changes to the landscape. In 1941 four hunters near Lac Ste Anne, in a week, shot and canned 300 sealers of grouse. At seven grouse per sealer on average, that is a total of 2100 grouse. It is doubtful whether now one could see that many grouse in a life time.

Prairie rivers and streams at one time produced a phenomenal harvest of sport fish: walleye, pike and goldeye. Rivers are a reflection of their watersheds. What we do (and have done) on the land becomes reflected in water quality and quantity. Both have declined. The test for sustainable land use should be: “do the fish like it?” Whatever we do in the watershed it inevitably runs by and through a fish. Sport species abundance has plummeted in prairie rivers and in some reaches they are gone. The alarming issue is even resilient species like suckers are affected.

Big plans look down from an elevated perch and, given the



THUNDERHEAD CLOUDS, A BREWING STORM, A PRAIRIE RIVER: A QUINTESSENTIAL VIEW! SEAN GORDON



A PRAIRIE RIVER, THE MILK, WITH THE SWEETGRASS HILLS IN THE BACKGROUND. WIKIMEDIA COMMONS/WHEATEATER

scale of the Saskatchewan River Basin, it's appropriate to do so. But, if we want to solve problems that confront prairie rivers our view might need to decrease in elevation. Many of the solutions, the fixes, the changes have to happen at the level of the farm gate. That's where many organizations, like Cows and Fish spend their time. Whether the solution is wider buffers, or building a buffer, this happens at ground level. It doesn't mean activity, land use, has to stop, but land management surely needs to become more enlightened and more caring for our prairie Round rivers. It will mean extending that

reach into the watershed where there are wetlands that contribute substantially to prairie Round rivers.

There are already examples of exemplary stewardship to draw strength, solutions and stories from, as motivators. Some of it, most of it, isn't rocket science. Some strategic fencing protects critical riparian areas. Water developments that conserve water, protect the source and allow for increased herd health are significant steps forward. Grassed waterways and wetland retention ameliorate water quality issues. Stewardship changes aren't big, but when applied routinely and

consistently enough by many people the effect can be larger than one might think. The whole becomes greater than the sum of the parts.

What if we don't act? The answer isn't in the stars, or on the front page; it's in your right rear view mirror which points out: "objects in mirror are closer than they appear". We have re-engineered the landscape through which prairie rivers flow. We have asked more of these systems than they can provide. It shouldn't be surprising the response is a loss of ecosystem integrity,

diminished ecological services and increased risk for our future.

We need to develop a new view, an enhanced appreciation and a greater sense of responsibility, at all levels, for prairie rivers and their watersheds. The challenges for prairie watersheds are large but not unsolvable. Solutions revolve around elements of respect, awareness, education and stewardship.

If you think about it, a characteristically unique thing about prairie rivers is that nearly every linear foot of stream is managed by a prairie person. Headwater streams and rivers tumble down steep gradients, starting from melting glaciers and extensive snowfields, the landscapes are inaccessible, topographically rugged, and mostly unfarmable; we manage them as parks and other protected places.

But, prairie streams like Crowfoot Creek, like Iron Creek, the Battle River and dozens of others meander and twist from beginning to end through a variety of lands that are mostly privately owned or controlled. It isn't organizations, agencies or government managing these lands, the riparian fringes and the wetlands. It is the prairie person that manages these rivers,

quite often from top to bottom, upstream to downstream, headwaters to confluence and who have the most influence on these systems.

Potentially, prairie rivers can have many friends, but the process of building that friendship, through awareness and education, leading to respect, can be challenging. The role of resource professionals is first to interact and engage with those who have the greatest influence on prairie rivers.

Cows and Fish has been doing that for over two decades; listening, collecting stories from prairie people, particularly ranchers and farmers who manage the lands which encompass rivers, streams and wetlands. First comes a conversation, followed by understanding and then a pathway is possible towards the science and management of these critically important rivers, streams, riparian areas and wetlands.

The stories of prairie people and their association with the land are key to understanding these friends and stewards of prairie rivers. Farmers and ranchers are natural story tellers, with a treasure trove of experiences and learnings.



A quick conversation can be a transition to coming out hours later knowing the story of their creek over the last 80 years. This is often punctuated with cake or lunch perhaps, and always coffee.

Like so many other Canadians, stories from rural Albertans tend to involve the weather – droughts, floods, too hot, too dry, too wet – but once you get past the preliminaries, their stories weave together family, history, nature and landscapes, the ties that bind those who work on and around the land together. Stories weave together a tapestry, much like our



VERMILION RIVER. LORNE FITCH/COWS AND FISH

creeks and rivers form the yarn that stitches together Alberta. Stories awake a sense of place, of belonging, of trust and partnership with the land.

These stories help resource professionals to travel with the storyteller down a path toward engaging a community of people. With awareness and insights develops a community that can begin working together on a watershed scale. At the core of this is stewardship, something Cows and Fish has worked to support for over 20 years. Stewardship is the act of knowing about, caring for and maintaining the land; it's keeping the pieces of the landscape intact and functioning both now and for the future.



As Aldo Leopold wrote:

"We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect."

All prairie people are part of, contribute to and influence a watershed and rely on it. These

waters don't just flow to our mailbox, or past our front door; on the contrary, prairie rivers may start in our backyards. They are a key part of our landscapes, our lives and our livelihoods. Being more aware of them, managing them with care and attention and ensuring a stewardship ethic persists is a follow-up to Leopold's wisdom and advice.

Ponderables

Forests, lakes, and rivers, clouds and winds, stars and flowers, stupendous glaciers and crystal snowflakes - every form of animate or inanimate existence, leaves its impress upon the soul of man.

ORISON SWETT MARDEN

Ponderables

iPods and 3-D television do not exempt our big-brained, thumb-wielding race of primates from the laws of biology. In this era of deepening ecological debt on a global scale, Canadians must insist that our national leaders accept and fulfill their duty to safeguard our natural security as vigorously as they do our military security.

FROM THE PROLOGUE OF THE BOOK: DOWN THE DRAIN: HOW WE ARE FAILING TO PROTECT OUR WATER RESOURCES, BY RALPH PENTLAND AND CHRIS WOOD, GREYSTONE BOOKS (ISBN: 978-1926812779).

RICHARDSON'S GROUND SQUIRREL CLIMBING
THE POPLAR TREE TO GET INTO THE
SQUIRREL'S CACHE. DEBBIE AND ALAN GODKIN

Nature Diary: Richardson's Ground Squirrel and Red Squirrel

BY DEBBIE AND ALAN GODKIN

From my deck, I look south past the old red hip-roof barn that marks the edge of our property, out onto a farmer's field.

Every spring in March, when snow still blankets the ground, I'd see the male Richardson's Ground Squirrels eating on the few bare patches of dried grass. On occasion, I'd see a Red-tailed Hawk swoop down and catch an unsuspecting squirrel. In the fall after the fields were harvested, and the male juveniles were still active, I'd see them standing on their mounds surveying their new landscape, and chasing one another in youthful fashion. But then one spring my "from a distance view" of the ground squirrels changed to an "up close view" when one moved into our yard.

During the mating season, when the males fight to get near the females, two males chased each other blindly around our yard. During one of many frenzied chasing episodes, they discovered the sunflower seeds on the bird ground feeder by the poplar tree that the Red Squirrel occupied. Opportunists that all animals are, the surviving male (the other

male, beaten and battle-scarred, died of its injuries) moved onto the lawn and dug a burrow close to the new food source. Red Squirrel, a pound of pure nervous energy, came streaking down the tree trunk upon seeing his cousin intruding on his space, and scolded steadily. But it was all one sided. Ground Squirrel ignored his warnings and continued digging and filling up on seeds.

Ground Squirrel quickly adopted a routine, coming out of his burrow only when all was quiet in the yard except for bird songs and Red Squirrel's warnings. In the weeks that followed, under the watchful eyes and constant scolding of Red Squirrel, he packed lawn grass to build a nest, and packed seeds in his expandable cheek-pouches until he'd stored enough to eat underground before emerging in the spring.

Possessed with an abundance of patience, he'd often stand and stare at his surroundings with

a bland, almost sad expression on his face that he wore whether eating or alarmed, a look I couldn't always read. One day he was sitting at the base of the poplar tree for a long while, looking up and sniffing the air. Suddenly he dug his claws into the trunk and climbed four feet into the large tree cavity. He didn't waste time getting into Red Squirrel's cache. After eating every last seed he was content to sit and gaze out at the world from his pedestal.

When Red Squirrel returned from storing cones in his pile under the spruce nearby, and spotted Ground Squirrel in his tree, he immediately confronted him and assumed his classic attitude stance. His body vibrated, his bushy tail flagged over his back, teeth barred, he scolded, then streaked around the tree trunk, then scolded some more. I thought this encounter would have aroused a reaction from Ground Squirrel, but he didn't bat an eye. Armed with a new strategy, Red Squirrel charged him repeatedly, each time turning just as their noses



made contact, but he still didn't budge. Ground Squirrel's firm stance and silence must have conveyed a loud message – "I could beat the crud out of you if I wanted to!" – because Red Squirrel backed off and retreated to his spruce tree.

From then on his threats were reduced to mere chatter. He minded his own business and continued to pack sunflower seeds into the tree, carrying one at a time. At that rate it would take him weeks to replenish his cache. But when he was away storing more cones, Ground Squirrel climbed into the tree and ate his cache. Tirelessly, he packed more seeds, only to have the ever ravenous Ground Squirrel consume them. It seemed unnatural to see Red Squirrel on the ground quietly eating seeds just a few feet away from Ground Squirrel. But Red Squirrel wasn't totally defeated, he still scolded and chased the birds.

THE RED SQUIRREL WOULD STREAK AROUND THE TREE TRUNK, STOP AND SCOLD, THEN STREAK SOME MORE.

DEBBIE AND ALAN GODKIN





RICHARDSON'S GROUND SQUIRREL GAZING OUT AT THE WORLD FROM HIS PEDESTAL AFTER EATING THE RED SQUIRREL'S CACHE. DEBBIE AND ALAN GODKIN

Often a Song Sparrow, Black-capped Chickadee, or House Wren would fly over Ground Squirrel's head or land beside him, yet he never flinched. But when the Baltimore Oriole came to feed on an orange I'd set out, it announced its arrival with a loud, harsh sound which sent him racing for the safety of his hole every time. Maybe the sound reminded him of a Hawk.

By August, Ground Squirrel had doubled in weight. One day when climbing the tree he lost his grip

and slipped back down. He tried again and again unsuccessfully. His tree climbing days were over. He wasn't the slim figure that climbed the tree with relative ease a few months earlier. His body was rolling in fat. He surely had ample reserves to live on while he slept the winter away. Red Squirrel couldn't have been happier. He sat in his tree cavity and ate seeds while Ground Squirrel looked up at him longingly.

SIR JOHN RICHARDSON.

WIKIPEDIA

WHO WAS RICHARDSON?

Richardson's Ground Squirrel was named after the Scottish naturalist Sir John Richardson (November 5, 1787 – June 5, 1865), who was a Scottish naval surgeon, naturalist and arctic explorer. He traveled with John Franklin in search of the Northwest Passage on the Coppermine Expedition of 1819–1822. Richardson wrote the sections on geology, botany and ichthyology for the official account of the expedition.

The natural history discoveries of this expedition were so great that they had to be recorded in two separate works, the *Flora Boreali-Americana* (1833–40), written by William Jackson Hooker, and the *Fauna Boreali-Americana* (1829–37), written by Richardson, William John Swainson, John Edward Gray and William Kirby.



Ground Squirrel's active days were coming to an end. In late August he started hibernating, taking torpor bouts that lasted two or three days and longer, until on September 21, he made his final appearance. He ate a few mouthfuls of grass and seeds before he retreated to his burrow and curled up in a ball and went to sleep. He never emerged in the spring.

What is the GBBC?

It is the Great Backyard Bird Count (GBBC) and for 2014 will take place Friday, February 14, through Monday, February 17. Please join us for the 17th annual count!

The Great Backyard Bird Count is an annual four-day event that engages bird watchers of all ages in counting birds to create a real-time snapshot of where the birds are.

WHY COUNT BIRDS?

Scientists and bird enthusiasts can learn a lot by knowing where the birds are. Bird populations are dynamic; they are constantly in flux. No single scientist

or team of scientists could hope to document and understand the complex distribution and movements of so many species in such a short time.

Scientists use the GBBC information, along with observations from other citizen-science projects, such as the Christmas Bird Count, Project FeederWatch, and eBird, to get the "big picture" about what is happening to bird

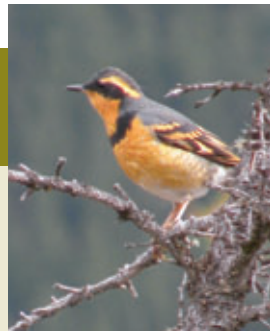
YOU MAY GET LUCKY AND SPOT A VARIED THRUSH!

GEORGE HALMAZNA

populations. The longer these data are collected, the more meaningful they become in helping scientists investigate far-reaching questions.

Everyone is welcome—from beginning bird watchers to experts. It takes as little as 15 minutes on one day, or you can count for as long as you like each day of the event. It's free, fun, and easy — and it helps the birds.

Participants tally the number of individual birds of each species they see during their count period. They enter these numbers on the GBBC website. For full information: www.birdsource.org/gbbc/whycount.html.



The Great Backyard Bird Count is led by the Cornell Lab of Ornithology and National Audubon Society, with Canadian partner Bird Studies Canada and sponsorship from Wild Birds Unlimited.

Charley's Nature Note: 2 Fall Moths

BY DR. CHARLES BIRD

Sept 28: We have been having marginal frost most nights for the last week here in Erskine, Alberta.

The leaves on the trees and shrubs have changed color and are starting to fall. I dug the last of our carrots yesterday and everything else in the garden was brought in some time ago. There is a bite to the air in the morning and it isn't until later on that one can go out without a warm sweater and jacket.

I saw a Clouded Sulphur butterfly yesterday but that may be the last. Every once in a while, I see an anglewing butterfly (probably a *Polygonia satyrus*), a Mourning Cloak or a Milbert's Tortoiseshell, but they overwinter and one can expect to see them on warm days.

Last night, around 10 PM, I noticed two moths at our kitchen window. These are fall moths and they can take some cold whereas the ones we see during the summer can't.

The most noticeable one was the Linden Looper Moth (*Erannis tiliaria*). You can read about it at http://entomology.museums.ualberta.ca/searching_species_details.php?s=3893.

ualberta.ca/searching_species_details.php?s=3893. One of the interesting features of this moth is that the females are wingless, so all the individuals that we see flying around are males. While you are at the above site, click on some of the features such as seasonal distribution, specimens in the database and the map which shows where the cited specimens are from. The first of the images [Fig 1] is of the underside of a moth as seen through the window, the second is a natural view.

The second species is not as noticeable. It was a Juniper Carpet Moth (*Thera juniperata*), also in the family Geometridae. A species page for it is http://entomology.museums.ualberta.ca/searching_species_details.php?s=4803. Even though the descriptive part hasn't been written yet, you can still click on the other features, as well as see an image. The food plants are junipers. Our neighbour has a juniper bush and that presumably



FIG 1. CHARLES BIRD



CHARLES BIRD

is where the adult came from. The species is common in British Columbia which is from where most planted junipers have originated. You can read more about this species at <http://seabrookeleckie.com/category/moths/page/4/>. Enjoy the fall and keep an eye out for another late species which also has wingless females, the Bruce Spanworm (*Operophtera bruceata*), yet another Geometrid.

By the way, David Beadle and Seabrooke Leckie have recently published the excellent *Peterson Field Guide to Moths of Northeastern North America*.

Dr. Charles "Charley" Bird is a university professor, publisher of 300+ scholarly articles, long-time advocate for Alberta conservation issues, active with Federation of Alberta Naturalists (Nature Alberta) and in particular with his local group, Buffalo Lake Naturalists Society (a Nature Alberta Corporate Club). In 1978, he received Nature Alberta's Loran Goulden Award. Charley's interests and expertise are broad indeed, but especially butterflies and moths; he was the lead author for Alberta Butterflies, published in 1995.

First Hand: The Chickadee House Builders

BY WILF HEWLETT

In late April of this year I noticed a pair of Black-capped Chickadees flying continuously around a large maple tree in the front yard next door. After watching awhile I realized that they were excavating a nesting cavity.

Those birds were very busy! One would enter the hole and immediately come out and fly up high in the tree. Sometimes you could see it spit out a cloud of dust, sometimes you couldn't see it from where I was sitting. As it went, one was in there picking up another load and the other outside dumping, coming back and waiting for the other one to come out. This went on for nearly two weeks, at least 10 hours a day.

After this I assume it was the male that sat nearby most of the time. I watched for feeding behavior but missed that. I looked and looked for the entrance but could never see it from the ground even

though it was only up about eight feet.

I was a little concerned about the young ones because the tree was scheduled to be removed

but as luck would have it that didn't happen until into July after the brood had left. When they removed the tree we salvaged part of the nest cavity of which a photo accompanies this missive.



WILF HEWLETT

First Hand: Feeder Diversity!

It's always thrilling to get several species of birds at your feeder at once. Dave Mackenzie got this photo of a male House Finch

(bottom), a female Purple Finch (top, left – note white eye line), and a White-crowned Sparrow (top, right).

[From Sagebrush Chronicle, Oct 2013]

DAVE MACKENZIE



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 Grassland Tour 2013

BY BOB PARSONS

BROOKS/LAKE NEWELL MAY SPECIES COUNT, MAY 18-19

Enthusiasm was high as over 40 participants from throughout Alberta (and British Columbia) checked into Tillebrook Provincial Park, our customary headquarters for the annual Brooks May Count. Now in its 15th year, the count was again sponsored by Cenovus, TransCanada Pipelines, and Ducks Unlimited Canada. The count is a joint Edmonton/Calgary initiative and over eight clubs were represented again this year, with the usual high ratio of very experienced birders!

Early scouting by the Fox boys and Brian Stephens, prior to the long weekend, seemed to indicate a slow start to the spring migration northwards. James remarked that on the preceding Tuesday he counted only four species of birds in the campsite. The scouts were able to confirm good road conditions in most areas. Most reservoirs were topped right up (so no sand bars or gravel spits), most ponds had average water levels, and temperatures were cool during scout week.

Weather conditions during count weekend were not too bad, with partly clearing skies, some scattered showers, light to moderate winds, and temps ranging from 6 to 20 °C. The final total was 167 bird species, which is just above the average for the 15-year count. There were the customary eight zones, each zone having a captain and a band of willing spotters. Many participants

were returnees, of course, so it was easy for me to split up the zones.

On Saturday evening we held the usual social, and all present were keen to talk about their birding and plant study day. Saturday highlights included a Long-eared Owl out by Bantry Reservoir, at least two Burrowing Owls in the Rolling Hills section, close to 50 Whimbrel, an Osprey, and one lone Tundra Swan. Hawk numbers were good, and I should mention record numbers of Black-necked Stilts (125) as well as Wilson's Phalarope (1143). Various door prizes were handed out, and the annual Shoveler Award went to Gerald Romanchuk, who had some slight problems running off the muddy trails close to Tide Lake!

No new species were recorded this year. Missing birds included Turkey Vulture, Cooper's Hawk, Sanderling, Peregrine Falcon, Ruddy Turnstone, Pectoral Sandpiper, Short-eared Owl, Violet-green Swallow, Western Tanager and Le Conte's Sparrow. Unusual species included Purple Finch, Common Nighthawk, Hairy Woodpecker, Bobolink, Mountain Bluebird, American Pipit, and Swamp Sparrow, a fair indication of the slow and late migration. Both Marsh and House Wrens were low in numbers, as were American Bittern (4), Ring-necked Pheasant (16), Goldfinch (5), and many of the usual warblers, namely Black and White, Blackpoll, and Common Yellowthroat.

Looking at the high numbers spotted over the past four years, mention should be made of 152 Pine Siskins, 161 Sprague's Pipit,

18 Lark Sparrow, 135 Cinnamon Teal, 6400 Black-bellied Plover, and 79 Spotted Sandpiper. All in all it was a very good count, with exceptional totals from Zone 8, the Medicine Wheel Project, and the area around Bantry 1 and 2. Full results will be posted on both the Nature Calgary and Edmonton Nature Club websites.

MILK RIVER/WRITING-ON-STONE MAY SPECIES COUNT, MAY 25-26

Twelve keen and experienced birders gathered at Writing-on-Stone, our traditional count headquarters. The weather forecast looked fair after some mid-week showers. The coulees were all full, and Pakowki Lake was almost overflowing again this year. There was not quite so much field water this year, but the regular spots provided good shore bird viewing areas. The Manley team spent the Saturday in the Pinhorn Grazing Reserve; Donna and Arthur Wiekowski travelled Hwy 500 along the Montana border; Earle Covert concentrated on Coutts and Milk River townsites; and Ken Orich and Toby-Anne and Jordan Reimer took care of Crow Indian Lake, Vernon Flats, and Etzikom Coulee. On Sunday we all concentrated on areas to the east of the zone, including Pakowki Lake.

Generally, road conditions were excellent compared to the mud fiasco of last year. There was a lack of reed growth again this time around, so it was tough to spot Bitterns, plus Black-crowned Night Heron and Marsh Wren numbers were down. The total for the weekend was 147 species, which equals the second highest total ever.

Bird species missing this year included Warbling Vireo, Grasshopper

Sparrow, Ruby-crowned Kinglet, Black-capped Chickadee, and Red-necked Grebe. Unusual species seen included 5 Barrow's Goldeneye (Pinhorn), 1 Snow Goose, 1 Yellow-breasted Chat (always seen count week!), Bullock's Oriole, Cassin's Vireo, and 2 American Pipit.

Species seen in low numbers were Short-eared Owl (1), Pied-billed Grebe (1), Horned Grebe (2), Marsh Wren (13), and Canvasback (40). The high numbers list looks pretty impressive and includes 284 Sanderling, 60 Marbled Godwit,

438 Red-necked Phalarope, 776 Gadwall, and over 1000 Northern Shoveler. American Avocet (450) was exceptional, along with 24 Long-billed Curlew and 16 Red-tailed Hawk.

I popped in to see Tom and Lois Gilchrist, who provided me with an excellent dinner and a nice cold beer! Many thanks to our sponsors Cenovus, TransCanada Pipelines, and Ducks Unlimited Canada. We could not do all this without your terrific support.

John Acorn GETS MAJOR AWARD



The Entomological Foundation is pleased to announce Dr. John Acorn as its 2013 Entomological Foundation Medal of Honor award winner. This award is the highest award presented by the Foundation and is given only to those who have attained preeminence in the field through outstanding contributions. John is well known as the writer and host of the television series Acorn, The Nature Nut, host of Twits and Pishers, author of seventeen books, including many well-received field guides, and a writer of a regular column, The Terminal Segment, for American Entomologist.

These days John teaches at the University of Alberta and continues his involvement with public communication in a variety of forms. John has been the recipient of numerous other awards, all recognizing his contributions to public education and entomology.

The award was presented at Entomology 2013, the 61st Annual Meeting of the Entomological Society of America in Austin, TX from November 10-13, 2013.

Jim Stelfox Retiring

Below is an Oct 1st email sent by Jim Stelfox to friends and colleagues. We publish it here to honour Jim's outstanding contributions to natural history and conservation in Alberta. Jim was the Senior Fisheries Biologist, Southern Rockies Area. As Sandra Foss said, "We will miss this man!"

Yesterday morning, CBC radio had an interesting piece about whether people should still use things, or throw them out, when they are past their "best-before" date.

After 35 years of working for the Fish and Wildlife [F&W] Division, I am sure that I have passed (or will soon pass) my "best-before" date, and have decided to retire before I am thrown out :-)

It's been a real pleasure to be able to work with so many people who share a commitment and passion for the resource. I am convinced that this is what has enabled employees of the F&W Division to maintain their spirit and commitment to the resource, despite the seemingly endless reorganizations. I am also heartened to see so many young faces recently recruited to our ranks, and that they share this passion.

My last day in the office will be on October 16. Hopefully I'll see some of you in the future while I'm out in the field, enjoying my retirement by spending more time hunting and fishing.

Bunting Northern Exposure

LARK BUNTING. RICHARD KLAUKE

Birders in the Cold Lake and Lac La Biche area this year found two Buntings that were getting some Northern Exposure outside of their normal southerly ranges.

On May 26th, during the Cold Lake May Species Count, a male Lark Bunting (*Calamospiza melanocorys*) was observed and photographed by Richard Klauke along the west side of Cold Lake near English Bay. That same day, a Lark Sparrow (*Chondestes grammacus*) was also observed along the west side of Cold Lake near the mouth of the Medley River. Both species are rare sightings north of Red Deer; most sightings are south of the Hwy #1 corridor, primarily in the southeast areas of the province around and south of Medicine Hat where they are generally common.

Later in the season, on June 28th, a singing male Indigo Bunting (*Passerina cyanea*) was heard, observed and photographed by Richard Klauke in a small patch of remnant boreal (black spruce/birch) located along the

road in the field across from the Plamondon landfill site. The village of Plamondon is on the southwest corner of Lac La Biche. A quick follow-up on July 2nd by Ted Hindmarch found the bunting was still in the area. Although the male was exhibiting territorial tendencies, no female was seen. The male was not observed on a subsequent visit

made to further determine breeding status. In Alberta, the Indigo Bunting very rarely comes as far north and east as Lac La Biche, and is casually seen in Cypress Hills and Medicine Hat.

INDIGO BUNTING. RICHARD KLAUKE



Gibbons Badlands (P)reserve

BY PATSY COTTERILL

Did you know that Gibbons has its very own badlands?

An excellent example occurs on the steep slopes of the Sturgeon River alongside Highway 28, overlooking the town of Gibbons. These slopes have some of the same geologic features and vegetation as the well-known badlands of the Red Deer River at Drumheller and Dinosaur Provincial Park further south.

BADLANDS GEOLOGY

Badlands are formed when soft sedimentary rocks are eroded by water and/or wind. A once more powerful Sturgeon River cut down through bedrock beneath the land surface and exposed layers of sediments laid down in the Cretaceous Period some 60 to 130 million years ago. The layers consist of: smooth grey shale, which weathers to clay and is very slippery when wet; reddish ironstone; sandstone; and bands of dark organic matter in some places. Since the Cretaceous and

the earlier Jurassic (130 to 150 million years ago) were the ages when dinosaurs and cone-bearing trees were at their height, it is not surprising that fossils are found in these badlands. At Gibbons, fossilized cones of a relative of *Metasequoia* trees have been found.

Badlands were so-called by the early explorers and settlers because they are impossible to farm and difficult to travel through. But this means they have been left largely untouched by human activity and so are havens for nature. They are home to the plants and animals that are specially adapted to the badlands environment with its challenges of drought, sun and erosion.

UNSPOILT NATURAL VEGETATION

Over 155 species of plants have been found in the Gibbons badlands, which include steep clay slopes and crevices, moist ravines, gentler lower slopes with grasses and shrubs, and the lush vegetation of the moist river banks.



Brittle Prickly Pear Cactus colonize the steepest slopes and overhangs, along with Nuttall's Salt-bush; both have characters that help them survive in these very dry situations. At least 29 different types of grass grow on the slopes and flatter valley areas. They include Needle-and-Thread Grass, Porcupine Grass, and the distinctive "eyelash grass," Blue Grama. Brilliantly coloured wildflowers are in evidence from May through August. The soil is held together by a crust of small plants such as mosses, lichens, and prairie selaginella.

BUTTERFLIES AND SNAKES

Needless to say, with all the wildflowers, Gibbons badlands presents plenty of opportunity for butterfly watchers. Long-time residents of Gibbons speak of the garter snakes that used to be abundant on these slopes. Are they still there?

WHY THE BADLANDS ARE SPECIAL

With badlands largely confined to river landscapes, and most of the prairies lost to agriculture and development, natural landscapes such as Gibbons badlands and its grasslands are now rare. They



NEW DAMAGE FROM ALL-TERRAIN VEHICLES,
DONE SUMMER 2013. PATSY COTTERILL

represent a “living museum”, a showcase of former landscapes and a window into our natural heritage. They thus present huge scientific, educational, and recreational opportunities.

GIBBONS BADLANDS ARE AT RISK OF BEING LOST

If we can't develop the badlands, why do they need our protection? Do they need to be recognized as a nature preserve? Well, yes they do.

Human activities such as bush parties with bonfires and garbage left behind have a detrimental impact on the prairie.

And in the last few decades all-terrain vehicles (ATVs) have become a popular means of recreation, and there's nothing their riders like better than the challenges of hills and gullies. On Gibbons badlands, ATV riders have gouged deep ruts that scar the hillsides. They have flattened and destroyed vegetation and cut through the crust that holds the soil in place and curbs erosion. The bare ground of their tracks is ripe for invasion by weeds. Alas! The badlands and its prairie are far too precious to be abused in this way!

PROTECTING GIBBONS BADLANDS - WHAT CAN WE DO?

We need a multi-pronged strategy to prevent the badland slopes from deteriorating further. We need **good fences** to make access difficult, if not impossible, **for all but foot traffic**. We need **signs** to explain how sensitive the land is and why it should be respected. We need **interpretive signage** so that residents can better appreciate their good fortune in having such a natural feature within their town. And we need **local citizens** who will support these initiatives over the years.

Most natural areas close to settlement require some management. This is often done by a group of stewards or “friends” acting in concert with the local municipality. For Gibbons badlands here's what a group of stewards could do:

- Monitor the site for disturbances and trends (e.g., weed outbreaks, vandalism) and keep the Town informed - as simple as going for an afternoon or evening stroll, or taking your children or dog for a walk through the prairie.
- Raise funds, donations or grants for example, for infrastructure such as fences and signs
- Raise awareness of the badlands among local citizens and schoolchildren



- Work with Gibbons Historical Society to develop educational and interpretive programs and displays
- Work with the Communities in Bloom committee – extra points for the program can be gained by having a well-managed local natural area
- And simply walk in the area more often and watch the wildflowers change over the seasons. Increased pedestrian use will discourage the bush party and ATV vandalism.

If you would like more information or wish to be informed of the guided walks through the badlands prairie next year, please contact: engedmonton@gmail.com



**BLUE GRAMA GRASS
(BOUTELLOUA GRACILIS) SEED
HEADS. CHERRY DODD**

BRITTLE PRICKLY PEAR CACTUS (OPUNTIA FRAGILIS).

JUDITH GOLUB



Up Close Naturally: Hibernation

BY MARGOT HERVIEUX

With the arrival of short days and winter snow, I must admit that the idea of hibernation has some appeal. Those animals that do hibernate are not just falling asleep, however. Their bodies go through some amazing changes.

We call hibernation sleep but it is actually a very different body state. The body temperature drops and the breathing and heart rate slow. Ammonia, which would become toxic if it built up, is recycled instead of being released in urine.

When we hear the word hibernation most of us usually think of bears but they aren't the deepest hibernators. The real hibernation experts are the ground squirrels, chipmunks and woodchucks. These rodents spend up to eight months deep in their burrows waking only occasionally to eat a bit and relieve themselves. While hibernating, their body temperature drops to near freezing, they only take a breath ten times in an hour, their heart rate falls to a few beats per minute and they depend almost entirely on their fat reserves.

Bears on the other hand, take a more laid-back approach to winter sleep. Their body temperature doesn't drop much and

they wake-up more often even though they don't eat or drink for months. Female bears actually give birth during the winter and nurse their cubs during their half-sleep. It takes a lot to wake up a hibernating ground squirrel but it is quite easy to disturb a sleeping bear – just ask the researchers that study hibernation by taking a bear's temperature you-know-where.

Bats also survive the winter by hibernating. They migrate to caves or other protective shelters before dropping their body temperature and becoming dormant for many months. These creatures are particularly sensitive to disturbance during this time because they risk using critical energy stores when awakened before spring.

A variety of cold-blooded animals also spend the winter in suspended animation. Garter snakes gather by the hundreds in holes beneath the frost line. Wood frogs snuggle into the leaf litter and freeze solid – kept alive by antifreeze in the blood that prevents damage from ice crystals. A variety of insects, including

lady beetles and some butterflies, also simply find a hiding place and go dormant.

There are many strategies for surviving the winter. Some creatures migrate, some hibernate and the rest depend on adaptations like insulation and camouflage. Since hibernation really isn't an option for people, and migrating isn't always practical, I guess we will just have to use our own adaptations to enjoy another northern winter.



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



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Wildlife! Starring... Giant Water Bug

BY DENNIS BARESCO

Recently, this photo (Fig 1) was posted on Nature Alberta's Facebook page with the question: "My friend found this on her driveway this morning. Any idea what it is???"

The answer: a Giant Water Bug (*Lethocerus americanus*) – a scary-looking creature, indeed. As Acorn and Sheldon write in *Bugs of Alberta*: "With its swollen forearms, this critter looks a bit like Arnold Schwarzenegger holding two long spikes in front of his head." It also has a scary – that is, hurtful! – bite!

This particular individual was found on a driveway in St. Albert. What's a "water bug" doing on a driveway, you might ask? After all, its regular home is slow-moving water, cattail marshes and similar aquatic habitat. They can also, on occasion, be found in backyard and public swimming pools, which may be how they got the nickname of "toe biter."

Despite (or perhaps because of) their normal habitat, they commonly fly around at night, particularly in late summer and early fall when, since they are active year-round, they are looking for deeper water in which to spend the winter under the ice. However, they are attracted to street and yard lights, which is why they're often found on driveways, roads, in pools, etc.

As their name indicates, Giant Water Bugs are a bug, not a beetle; they belong to a family of insects

called *Belostomatidae*, in the order *Hemiptera* – which are the true bugs. Names, of course, are often confusing: maple bugs are indeed true bugs, but ladybugs are actually beetles. The word "bugs" is often used generically for any insect, especially those we find annoying. For example, the Acorn and Sheldon book, *Bugs of Alberta*, from Lone Pine Publishers (a great little volume, by the way), features a great many non-bug insects and even some non-insect arthropods.

The Giant Water Bug is one of the largest insects in Canada; it's the only one of its kind found in Alberta (found throughout the province) and can grow to 5 cm. Some species in the family grow as long as 10 cm.

Like all *Belostomatidae*, Giant Water Bugs are fierce predators – stalkers – which hold on to a plant near the water's surface, patiently and motionlessly in wait for a meal, then strike using their very powerful front legs to capture their prey. They cannot breathe underwater so have to come to the surface for air. When they are stalking, they stick a short breathing tube out of the water, which allows them to breathe while waiting for prey.

Larvae eat small aquatic invertebrates. Adults feed on anything they can handle: aquatic insects and crustaceans, small fish, frogs, salamanders; they have even been found to capture baby turtles and water snakes. After striking, they use their sharp beak to pierce the prey, then inject digestive juices; the prey dissolves within its own body and the Giant Water Bug then sucks out the liquefied remains. That doesn't sound very appetizing – unless you're a Giant Water Bug!

Then there's that bite – considered one of the most painful that can be inflicted by any insect. Fortunately, though excruciatingly painful, it is not dangerous and won't kill you or even make you sick. However, your hand or foot may swell dramatically; one person related how they lost all use of their hand for two weeks. Thus, it's recommended that you really should not handle this bug; if you do, and get bit, don't blame the bug!

Now, just in case you would like to know, Giant Water Bugs are a popular food in Thailand – or is that too much information?

[Information for this article from www.eduwebs.org]



FIG 1: THE GIANT WATER BUG IN ST. ALBERT.

Monitoring Raptor Nests

BY DON JAMES

The change in distribution and occupancy in 2013 is pronounced compared to the previous years, and there was no pre-June extreme weather event this year.

If Nature Alberta readers and members have an interest, I would be interested in comments on my notes below. I am isolated from the science so when I cannot put the pieces together I try to reach out to others. Contact me at donja@telus.net or 403-337-0179.

I have been monitoring about 50 raptor nests in a 200 sq km area around Carstairs for six consecutive years. On previous years I have a consistent occupancy – generally fidelity rate – for Great Horned Owl (GHOW) of 80+% between one of two, or one of three nests within respective territories.

In 2013 the fidelity and occupancy rates dropped to 20%. I don't know whether it was a redistribution or precipitous loss? In the same area and part of the same annual observations, I have noted good numbers of Red-tailed Hawk (RTHA) occupied nests (12-15 annually) and two or three Swainson's Hawk (SWHA) nests, again within respective territories. In 2013 the area experienced a reduced number of occupied nests by RTHA and no SWHA. RTHA arrived about three weeks later than previous years and the clutch numbers were reduced to an average of two, where in previous years the average was close to three. There were also two RTHA nests each with two eggs but both nests were abandoned prior

to hatch. This has not occurred in this area in the previous five years.

Although the populations may be stable within an unknown range, I am dealing with a landscape that has less than 4% suitable nesting habitat, so in the long term the population is not secure.

PERSONAL COMMITMENT

I am not an ornithologist or for that matter part of the bird watching community; I simply admire these birds for who they are and what they do in a very demanding environment. My business is as an environmental consultant with a long career throughout western Canada. I am a professional forester who has benefitted from tutelage by some great mentors like J. S Rowe for parkland and grassland ecology and Peter Murphy for my relationship with the forest landscape.

For many years, monitoring was personal. Then I obtained a Research Permit from Fish and Wildlife which I subsequently withdrew and have since maintained the work as a personal commitment. I have annual data from the current study area since 2007. My interest is backstopped by observed progressive devolution over decades of Fish and Wildlife research to the point

where the species database is dated and incomplete. Currently, the only work that goes on is in relation to the panic species like Peregrine Falcon, caribou and Grizzly Bear, whereas, in fact, there are a host of other indicator species that are at risk. I know that there are public groups that are doing work – eg: on Turkey Vulture, Northern Saw-whet Owl – but not enough is done to either engender public confidence or optimize decision making in the public interest.

Even the presumed common species, like the three I follow, are at risk here because of habitat loss; of the approximate 200 sq km I travel, there is less than 4% suitable nesting habitat and it is not stable. Add extreme weather events and the population here is not growing and hence not stable. By example, in August 2010, a hailstorm removed 14 occupied nests from my area.

Similarly, I am suspicious of the Alberta Biodiversity network of sample plots since, at least in Mountain View County, it does not reflect what is happening to habitat or what is currently residing here.

A bonus to me has been meeting many landowners who for the most part are both interested and keen to know about the birds, including conservation of habitat.

Starry Nights

Fall/Winter (November to January)

BY JOHN MCFAUL

FEATURED CONSTELLATIONS: : OCTANS, APUS, CHAMAELEON, DORADO, VOLANS AND HYDRUS



From his home on the shores of the Mediterranean, Claudius Ptolemy catalogued 48 constellations in the second century AD. Today there are 88 officially recognized constellations. Many of the 40 constellations added after Ptolemy were as a result of the many voyages of discovery which sailed to the southern oceans, well beyond the sight of Ptolemy, during the 16th and 17th centuries. These included Octans, Apus, Chamaeleon, Dorado, Volans and Hydrus which are to be seen clustered about the South Celestial Pole.

Octans has the central position where the South Pole is located. The star Sigma Octantis has the distinction of being the South Pole star. However, it is about 16 times fainter than Polaris, the North Star. Thus it is much harder to see. This is the case for most of the stars that make up the featured constellations. Octans commemorates the invention of the Octant, a navigational instrument, in 1730. There are many other instruments useful to these early sailors that were placed amongst the southern stars.

Besides these instruments there were a number of creatures that were featured in the new southern constellations. Apus (the Bird of Paradise), Chamaeleon (the

Chameleon), Dorado (the Dolphin fish) and Volans (the Flying Fish), and Hydrus (the Male Water Snake) were first described by Petrus Plancius, a Dutch astronomer, in 1595 and depicted in Johann Bayer's star atlas produced in 1603.

There are few noteworthy celestial objects amongst these faint constellations with the exception of the Large Magellanic Cloud in Dorado. It and the Small Magellanic Cloud located on the other side of Hydrus are two nearby external galaxies to our Milky Way Galaxy. They were named after Ferdinand

Magellan who organized and sailed with the first circumnavigation of the world in 1519-1522. The Magellanic Clouds are certainly a must to see by any northerner heading to the southern seas.

COMET ISON: On November 28th comet ISON will make its closest approach to the sun. A few weeks before and after this date it will hopefully be visible to the naked eye. How bright it will get is uncertain. As David Levi once said: "Comets are like cats: they both have tails and are both highly unpredictable". Please consult various websites on the internet or astronomy magazines for its exact position for the months of November through January.

CELESTIAL HAPPENINGS

Sun: Rise – Nov. 1 (08:34 MDT), Dec. 1 (08:28 MST), Jan. 1 (08:50 MST)
Set – Nov. 1 (18:00 MDT), Dec. 1 (16:18 MST), Jan. 1 (16:25 MST)
Times are for Edmonton; (Daylight Saving Time ends Nov. 3rd)
Note: Eastern Canada will experience a partial solar eclipse on Nov. 3rd.

Moon: Full – Nov. 17th, Dec. 17th, Jan. 15th
New – Nov. 3rd, Dec. 2nd, Jan. 1st

Planets: **Mercury** may be seen low in the SE morning sky from mid to late November. It is quite close to Saturn on November 25th and 26th.

Venus skims the south western horizon just after sunset from mid-November to mid-December. It is near the crescent moon on Nov. 21st and Dec. 18th.

Mars appears in the east during the early morning hours and is to be found 35 degrees above the southern horizon just before sunrise.

Jupiter is in the constellation Gemini and rises in the ENE about 9:30 PM in November and two hours earlier for each month afterwards.

Saturn is a morning object in the eastern sky from December to January. The moon is nearby on Dec. 28th and Jan. 25th.

Meteor Shower: Watch for the Leonids on November 17th, the Geminids on December 13th and the Quadrantids on Jan 3rd.

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

CLUBS PAGE



Weaselhead/Glenmore Park Preservation Society

On Oct 24th, the Weaselhead/Glenmore Park Preservation Society held its Annual General Meeting in Calgary, along with an art show and wine and cheese gala.

The Society, a Nature Alberta Affiliate Club, has been very active over the past twenty years and continues to be so with educational programming, an invasive plant and weed control program, litter pickup, and much more.

The goal of the Society is to protect and maintain the rich biodiversity of the Weaselhead/Glenmore area for the benefit and enjoyment of everyone in Calgary, now and into the future. This land comprises three parks – The Weaselhead Natural Environment Area, North Glenmore Park and South Glenmore Park. They were originally protected from development by the City of Calgary to ensure that the water in the reservoir remained clean

and uncontaminated, providing its citizens with that most precious commodity – clean water.

However, as Calgary has grown, pressure too has grown to run a major highway through the parks and across the reservoir – the South-West Ring Road, or South-West Connector. Clearly a freeway – what's being called a “Deerfoot Trail west” with 24/7 noise and lights – would have a huge negative impact on the area: its land, its water, the wildlife that call it home, and the people who enjoy its tranquility and beauty. Opposition to this has been one of the Society's constant concerns over the last 20 years.

For protection of natural areas to receive support, people need to be aware of the benefits that such areas provide, both to the infrastructure of a successful city and to the individual. Every year some 4,000 schoolchildren and 400 adults participate in outdoor educational programs run by the Society. These focus on meeting curriculum needs such as learning about wetlands or the role of decomposition, but also introduce children to the enjoyment of simply being outside.

Protection of urban parks such as the Weaselhead and Glenmore Parks requires active stewardship. Thousands of people hike, bike, run, and wander through them every day. In fact, with it being in the heart of Calgary, “most people visiting the Weaselhead,” says

A BEAUTIFUL WINTER SCENE IN WEASELHEAD. YVES DANSEREAU



WEASELHEAD VOLUNTEER WEEDERS PULLING KNAPWEED AS PART OF THEIR WEED CONTROL PROGRAM. WEASELHEAD/GLENMORE PARK PRESERVATION SOCIETY



Society President Paul Finkleman, “completely forget they are within city limits.”

Weaselhead/Glenmore Park
Preservation Society Executive

Director Lisa Dahlseide suggests that you visit the new website (www.TheWeaselhead.com) where you can enjoy the species index and stay informed on

park happenings. And she invites you to join them in conversations on Facebook. The Society’s Board of directors is open, friendly and welcomes your participation, input and concerns.

Weaselhead/Glenmore Park Preservation Society Comments on South West Ring Road in Calgary

On October 24, 2013 the majority of the Tsuu T’ina First Nations voted in favour of the SW Ring Road running through their land adjacent to the City of Calgary’s Weaselhead Natural Environment Park.

The Weaselhead/Glenmore Park Preservation Society’s mandate is first and foremost to protect and preserve the integrity and ecology of the Weaselhead so that future generations of Calgarians can enjoy one of Canada’s most pristine urban natural areas. The Weaselhead is the most biologically diverse natural area Calgary has, with over a thousand species of plants and animals. In regards to this massive freeway project, we must ensure wildlife corridors, biodiversity, wetlands, riparian areas, and water quality are protected and the impact on the alluvial aquifer minimised. This aquifer ultimately provides the source of 35% of Calgary’s potable water. About 16% of the population of Alberta rely on the

Elbow River for their drinking water supply.

Composed of gravel, sand and silt the shallow unconfined alluvial aquifer is very permeable and hydraulically connected to the Elbow River. The floodplain and riparian areas of the Elbow River overlie the aquifer, and a large stretch of this highway will be constructed on it. Studies show detrimental effects to water quality as a result of development in the upper reaches of the Elbow River’s flood plain and suggest that land use should be limited to reduce the impact on the underlying groundwater^{1,2}. In planning the road, river crossing, utility corridors and associated construction the Province must ensure the project does not cause short- or long-term deterioration in Calgary’s water supply from this aquifer, both in terms of quality of

water and quantity. The province is confident that the weight of the fills for the road, measuring from 5-17 m, will not alter the permeability of the aquifer. We indeed hope they are correct in their calculations.

The City of Calgary has agreed to sign the Durban Commitment³, a declaration recognizing the urgency of biodiversity loss. This international agreement aims to protect and enhance urban ecosystems, important nesting habitats and connectivity. In signing this the City promises among other things “to integrate biodiversity considerations in all aspects of our governance and development planning”. This road will reduce biodiversity. The initial 8 lanes of traffic and the eventual 16 lanes will be a substantial barrier to movement for some species, such as birds who

THE PATH THE ROAD WILL TAKE RUNS CLOSE ALONG THE EXISTING DIRT ROAD YOU SEE. SUSAN RYAN



¹ Bryer R. Manwell and M. Cathryn Ryan. Chloride as an Indicator of Non-point Source Contaminant Migration in a Shallow Alluvial Aquifer. *Water Qual. Res. J. Canada*, 2006. Volume 41, No. 4, 383–397.

² Bryer R. Manwell. Groundwater – Surface Water Interaction and Water Quality in the Lower Elbow River, Alberta. UNIVERSITY OF CALGARY

³ Available Oct 2013 at <http://archive.iclei.org/index.php?id=12224>

are rarely considered in highway planning⁴. Initially this road planned for no wildlife corridor. However, in recent discussion with Alberta Transportation, there is a 65m wide structure opening under the bridge with 30m of this planned for the rerouted Elbow River. The province does not expect that any wildlife movement will be impeded. Will this corridor be enough for the diversity of wildlife to be sustained? We hope so. Connectivity and green infrastructure are critical to biodiversity in the City.

Alberta is a proud province and we hope that our provincial and municipal leaders see this highway as an opportunity to showcase to the world their commitment to biodiversity and their engagement in environmental mitigation. We have an opportunity with this project to explore construction options that use the best technologies available to protect water quality and wildlife diversity. Alberta can present a highway to park visitors that has noise and light abatement, a magnificent wildlife corridor, and state of the art engineering to prevent water contamination.

Great cities have great parks, and there is no doubt that the planned proposal will have a hugely negative impact on this important and treasured parkland. We look forward to being included in the planning process to ensure proper environmental mitigation is in place. We invite you to join us. Please contact us if you would like to get involved or share your expertise. Please visit our website and Facebook page for continued updates. We encourage you to get engaged and contact your MLA and Alberta Transportation to demand a better road...or no road at all.

⁴ Journal of Applied Ecology 2009, 46, 1314–1322 Factors affecting the permeability of transportation and riparian corridors to the movements of songbirds in an urban landscape Marie A. Tremblay* and Colleen C. St. Clair

Weaselhead/Glenmore Park Preservation Society

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A PRONGHORN BUCK AND HIS HAREM; SEE "ON THE COVERS" ON PAGE 3. RICK PRICE



Nature *gallery*



RICHARDSON'S GROUND SQUIRREL AND RED SQUIRREL EATING SEEDS IN THE STICK PILE WHERE SPARROWS FEED. SEE THE STORY, PAGE 32. DEBBIE AND ALAN GODKIN



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