

A WILDLANDS ADVOCATE



THE ALBERTA WILDERNESS ASSOCIATION JOURNAL

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Bighorn Country

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Cover Photos

I doubt there are two Albertans who dedicated more to the Bighorn conservation campaign than Vivian and Dick Pharis. Our cover photo is one of Dick's many stunning photos of Bighorn Country. Vivian describes the photo as follows:

This picture is from the headwaters of Job Creek, upstream of where the Job Creek trail comes over the pass from Coral Creek. It is probably from about 2 km upstream of the pass trail. This is not a place many, except for sheep hunters, would ever go. It is therefore some of the wildest and most spectacular country in the Bighorn - a secret pocket, not all that accessible.

The country gets rougher and rougher upstream from the trail over the pass, due to washouts and deep, rocky streams coming out of the tall peaks. Best to tie horses in the valley below and climb from there on foot. The further up, the wilder it gets, and the more ruggedly beautiful. The headwaters break into several tributaries, some going over passes into MacDonald Creek, some into Coral Creek. Gorgeous falls, bighorn sheep trails and cliffs of intriguing fossils as well as bighorn sheep themselves, lure you on to more and more adventure. PHOTO: © V. PHARIS



Featured Art

As you know AWA started a caribou flags campaign as part of our efforts to raise awareness of and support for the dire need to protect woodland caribou, a species-at-risk. You also will know that the Christmas season is nearly upon us. In this vein, we decided that our artistic offering in this issue would follow the twelve days of Christmas. In the December Advocate then you'll find 12 flags of the hundreds we have so far received. We hope you'll join us in appreciating the work that went into these and the other flags. We hope too that they'll inspire you to send us your own flag, visit the caribou4ever.ca website and support this vital conservation campaign. .

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ALBERTA WILDERNESS ASSOCIATION

*"Defending Wild Alberta through
Awareness and Action"*

Dedicated to the conservation of wilderness and the completion of a protected areas network, **Alberta Wilderness Association** is a voice for the environment. Since 1965, AWA has inspired communities to care for Alberta's wild spaces through awareness and action. With a provincial office and library in Calgary, AWA has active members, volunteers, and sponsors throughout Alberta and beyond. AWA is a non-profit, federally registered, charitable society. Donations and financial support are greatly appreciated, please call 403 283-2025 or contribute online at AlbertaWilderness.ca

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Please direct questions and comments to:

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The Bighorn... We Must Act Now

Before Mike Sullivan delivered this year's Martha Kostuch Annual Wilderness and Wildlife Lecture those of us who gathered at the Hillhurst Cottage School that evening paused to toast a Government of Alberta announcement made just hours earlier. We raised our glasses and toasted the promise AWA sees in the government's proposal to establish the Bighorn Wildland Provincial Park. Earlier that day the government announced its intentions for Bighorn Country: create the Bighorn Wildland Provincial Park; create three new Provincial Parks (David Thompson, North Saskatchewan River, and Ya Ha Tinda); create four new or expanded Provincial Recreation Areas (Bighorn Dam, Hummingbird, Shunda, and Snow Creek); reconfigure/establish two Public Land Use Zones (Kiska/Willson and West Country).

It's impossible to overstate the importance of the Bighorn to AWA. No conservation group has worked as hard for as long as AWA has to further conservation in the Bighorn. AWA members should take pride in the Bighorn initiatives AWA has spearheaded for decades now. Between 1984 and 1994 AWA staff and volunteers cleaned backcountry trails and camps of over 60 years of accumulated garbage. With the assistance of the provincial government, AWA airlifted tons of garbage out of the Bighorn. In 1994 AWA adopted the historic Bighorn Trail that starts at Crescent Falls and runs through Wapiabi Gap to Blackstone Gap.

Virtually every year since Vivian Pharis and others have worked there to maintain that historic trail. In 2003 AWA launched another unique, very positive, version of direct action – the Bighorn Recreation and Impact Monitoring Program. AWA stepped up in a way that neither government nor other conservation organizations were prepared to do – we studied and documented the extent of OHV use in the Bighorn and the impacts such use had on the land. When it comes to walking the stewardship talk in the Bighorn no public or private organization is AWA's equal.

For this reason, we're pleased to see that the boundaries of the Bighorn Wildland Provincial Park, the Crown jewel in this conservation/recreation/tourism proposal, conform very closely to those the Progressive Conservatives nearly put into place in 1986. The boundaries proposed then, the boundaries proposed now are very much the product of your organization's efforts. Indeed, the concept of Bighorn Country is based on Peter Loughheed's Kananaskis Country.

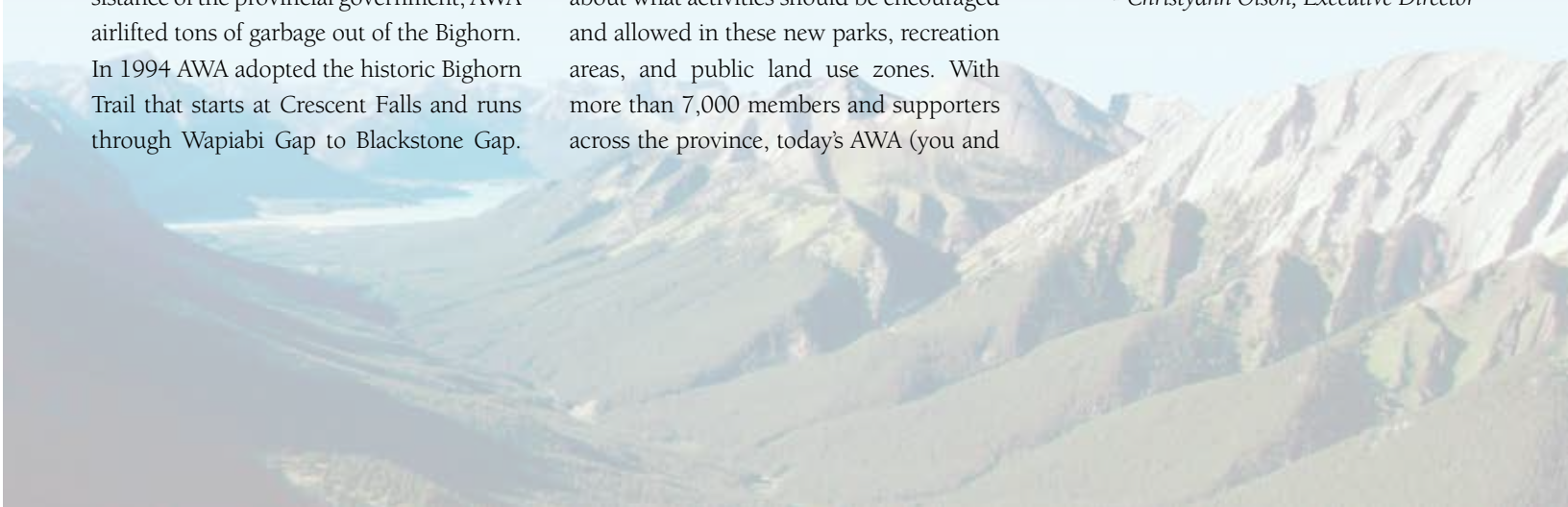
Park boundaries are one thing, what governments allow to take place within those boundaries is something else. Between now and January 31, 2019 Alberta Environment and Parks is conducting an online survey about what activities should be encouraged and allowed in these new parks, recreation areas, and public land use zones. With more than 7,000 members and supporters across the province, today's AWA (you and

me) have a tremendous opportunity here to honour and continue the efforts AWA staff and volunteers have made for decades now to conserve this area. Please take a minute to say Yes to Bighorn Country by sending an email letter at <https://tinyurl.com/bighorn-country>. **This government needs to have a positive response from us to make this happen in 2019!** As well, please take a little more time and complete the survey and urge your conservation-minded friends to do so also. The link to the survey is at: <https://talkaep.alberta.ca/bighorn-country>.

When I complete the survey I will urge the province to take their cue from the direction the government outlined thirty and forty years ago. In *A Policy for the Management of the Eastern Slopes (1977/1984)*, most of what may soon be the Bighorn Wildland Provincial Park was designated as Prime Protection Zone. This meant it was off-limits to industrial development and off-highway vehicle use. The same message was delivered in the Integrated Resource Plans developed for the Bighorn in the early 1980s.

My Christmas wish for 2018 is that all our elected representatives, will see the wisdom in taking their cues from what the government of the day proposed decades ago.

- Christyann Olson, Executive Director





ALBERTA
TOURISM, PARKS AND RECREATION

Office of the Minister

October 26, 1992

Ms. Vivian Pharis
Director
Alberta Wilderness Association
Box 6398, Station D
Calgary, Alberta
T2P 2E1

Dear Ms. Pharis:

Thank you for your letter of October 2, 1992 requesting our consideration in providing some level of legislative designation to the Bighorn Wildland Recreation Area. We would agree that this location does contain some of Alberta's wildest and most spectacular areas of the Eastern Slopes.

This area has been recognized by Alberta Tourism, Parks and Recreation for some time as having a high potential to meet protection, recreation and tourism objectives. We believe that this area could be legislated in a manner that would provide both an appropriate level of protection and facilitate recreation opportunities such as hiking, cross country skiing and equestrian use. Some front country nodes could be developed along the David Thompson Corridor with only appropriate types and levels of recreation activities permitted in the backcountry. These tourism activities could be supported by a range of legislative mechanisms that facilitate various conservation and recreational use objectives.

Currently the Department is working in consultation with other agencies to develop a strategy to identify areas that may require longer term legislative protection. Subject to receiving Cabinet approval to proceed with this exercise, it is our intention that the general public, industry and environmental groups, such as the Alberta Wilderness Association, would play an active role in providing input to help determine those priority sites. The objective of this strategy is to determine where and how we can bring mutually agreed to protection objectives into balance in a manner which integrates, where appropriate, other objectives such as recreation, heritage appreciation and tourism.

It is our hope that imminent decisions will result in an opportunity for this positive strategy to get underway. We look forward to constructive and supportive input from groups such as the Alberta Wilderness Association.

Yours sincerely,

Don Sparrow
MINISTER

cc: Hon. Ralph Klein
Hon. LeRoy Fjordbotten



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In October 1992 the Hon. Don Sparrow, the Progressive Conservative Minister of Tourism, Parks and Recreation, outlined to AWA's Vivian Pharis exactly what government, 25 years later, should do with respect to Bighorn Country. No industry, no OHVs in the Prime Protection Area.

Grasslands:

Give the Gift of Protection to Milk River Ridge

By Christyann Olson, *Executive Director*



There is a magic in the 360 degree view the grasslands landscape offers and it is a magic those who have walked on the prairies know. For me, the grasslands are a place of renewal, of song and whispers, of mystery and freedom. It is a land where sunrises and sunsets span the full horizon.

If I had a wish for wilderness this year it would be to see a missing piece of our grasslands network protected. The expansion of the Twin River Heritage Rangeland Natural Area to include part of the Milk River Ridge and its reclassification to a Heritage Rangeland from a Heritage Rangeland Natural area would be a gift long overdue. It seems simple enough, a “no brainer” as some might say, and as my grandchildren offer with their carefully chosen wishes, this expansion and reclassification isn’t a very expensive gift to ask for.

Although inexpensive to deliver, this gift is very valuable and will help to sustain any

number of wildlife species. Some of those species are endangered, some are threatened, and some are secure on their home landscape. Rare plants and rough fescue grass, wild native flowers, bees and butterflies, hawks and owls, deer and elk all are found here. So too has this land been visited by a sow grizzly and her three cubs. Sharptail grouse dance here while pintail ducks nest. The presence of such a variety of species reminds us how valuable a wild and intact grasslands space can be.

And so, while it seems crystal clear and commonsensical to protect this wild space, why has it taken so long for its proposed protection?

The South Saskatchewan Regional Plan (SSRP) identified this area as valuable conservation lands – there are three layers of Protective Notations on them. Yet, their more formal and stronger protection has been blocked by the aspirations of a petroleum company that believes it should be

allowed surface access to the area in order to drill and build a pipeline. AWA’s long-standing efforts to secure protection for the native grasslands of Milk River Ridge summarize well the challenges we face in getting the government to manage our conventional oil and gas resources in a manner that is sensitive to ecological values.

AWA is not opposed to subsurface directional drilling access. Through directional drilling oil and gas companies now can exploit pools that are kilometres away from their drilling platforms. We want to see the surface of this internationally significant area left undisturbed and we believe that if technology needs to catch up to make this so – then we need to wait until it does.

AWA has worked with local landowners for years to ensure that this special place is protected. The saga of the Milk River Ridge through the past year or so is a case worth taking a look at. In June 2017 Granite Oil Corporation’s leases in the area were due to expire – an expiry that AWA repeatedly urged the Alberta Energy Minister to approve. Instead, without any explanation and knowing full well the concerns and the intent from the Minister of Environment and Parks that this area should be protected, Alberta Energy renewed the Granite leases. AWA and others filed Statements of Concern with the Alberta Energy Regulator and renewed those concerns with phone calls and further letters of concern.

In June 2018, a full year later and only months before the leases would again expire in December 2018, Granite applied to the Alberta Energy Regulator (AER) to drill a multi-well battery and pipeline just



PHOTO: © C. OLSON

outside the existing boundaries of the Twin River Heritage Rangeland Natural Area on the Milk River Ridge lands identified in the SSRP for protection.

In August 2018, after years of preparation, review, on the ground assessments, documentation and consultation, Alberta Environment and Parks (AEP) proposed to expand the boundaries of the Twin River protected area and reclassify it to a rangeland from a natural area. The reclassification fully supports grazing - AWA always has supported cattle grazing practices that promote healthy grasslands and the family that has leased these lands are highly recognized for their outstanding stewardship and care of these lands. The proposed expansion will take in the lands Granite Oil hopes to industrialize and thereby should prevent the proposed drilling and surface disturbance. New oil and gas, with associated development, would be prohibited if the proposed expansion proceeds. What Granite has applied for is new oil and gas development. The two-month consultation period yielded an overwhelming public response giving support to the Ministry of Environment and Parks proposal for expansion and reclassification.

What happened next belies all common sense. AWA along with others concerned about the area were contacted by the Alber-

ta Energy Regulator (AER) to meet and consider Alternative Dispute Resolution (ADR) over the application for surface access. Interviews began and, before they were finished, AER wrote to say there would be a hearing to determine whether the Granite Oil application would be approved.

There are now three parallel processes, all costly ones, in play that leave one wondering if the departments know what each other is doing and what the government's goal truly is for this small but vitally valuable area. AEP is close to obtaining cabinet approval for the reclassification and expansion, AER wonders if we will consider ADR while another division within AER is proceeding with a hearing process and has denied AWA standing at that hearing.

Due diligence demands that an individual, person or corporation, is aware of and understands the status of something, the condition it is in, and its risks and potential liabilities. This applies to the purchase of an automobile or a subsurface lease and it is a responsibility that belongs to the purchaser, to the developer. Why would we facilitate the ambitions of a company that has known what they were proposing would compromise important conservation values and the protection of our biodiversity. Due diligence here rested with Granite Oil and, in our opinion, they have failed to exercise that responsibility well.

The Milk River Ridge case tests significantly the province's commitment to protect this area and say "no" to the additional industrialization of Alberta's native grasslands. Despite years of pleading for our governments to protect this environmentally significant area from surface disturbance, there seems no urgency to make it so. We hope this isn't the case and that, before the end of the year, government realizes the ecological costs of surface drilling far outweigh the possible benefits that will accrue to one small cap Alberta oil company. That is my hope for wilderness in these last days and weeks of 2018. ▲

Much of Alberta's native grassland is fragmented or degraded. Although there are few large intact blocks of native grasslands left in Alberta, they support approximately half of the rare ecological communities, 40 percent of rare vascular plant species, and 70 percent of mammal, bird, reptile and amphibian species considered "at risk" or "may be at risk." The remaining large blocks of native grassland are extremely significant for biodiversity conservation and their protection is essential.

PHOTO: © C. OLSON

Habitat, What Habitat?

The Greater Sage-Grouse Emergency Order and a Call for Heightened Due Diligence

By Jason Unger, *Executive Director, Environmental Law Centre*



This story features an oil and gas company, the federal *Species at Risk Act* (SARA), and insolvency – it is a story that calls on companies (and investors) to conduct their due diligence around impacts on species at risk and habitat more generally.

This story is also about how bankruptcy and insolvency legislation, its administration and public interest environmental outcomes are linked. (See blogs regarding the Orphan Well Association for more context here.) Admittedly, this story is from the perspective of preserving species at risk, and should not be construed as diminishing the real and harsh impacts insolvencies have on people.

This story involves the first federal Emergency Protection Order (EPO) for a species at risk in the province, an order focused on protecting *some* of the habitat of the Great-

er Sage-Grouse in South Eastern Alberta, a claim of *de facto* expropriation of property by the company (and receiver), and the disclaiming of oil and gas assets by the receiver (resulting in still more orphaned wells in the province).

de facto expropriation defined – distilled down, *de facto* expropriation is a claim for compensation based on the impacts of a regulatory decision that has the effect of depriving a “land-owner of all reasonable use” of property. *Canadian Pacific Railway Co. v. Vancouver (City)*, [2006] 1 SCR 227, 2006 SCC 5

The majority of this information can be found on the Receiver’s, Ernst and Young, website.

The recent history of the Manyberries field: November 2012 – May 2018

November 7, 2012: LGX Oil + Gas Inc. (LGX) acquired a majority working interest in the Manyberries field for ~\$45.5 million.

December 4, 2013: an EPO for the protection of Greater Sage-Grouse is published by the federal government under SARA and applies to areas of public land in the Manyberries area.

February 18, 2014: the EPO comes into force.

August 14, 2014: LGX, the City of Medicine Hat (also an owner of oil and gas assets) and others file an application for judicial review, claiming the EPO is *ultra vires* the pow-



The Greater Sage-Grouse. PHOTO: © C. OLSON



Some of the oil and gas activity in the Manyberries area, an area hosting critical greater sage-grouse habitat. PHOTO: © C. OLSON

ers of Parliament or that the order should be set aside on procedural fairness grounds. (For a copy of the application see the Third Report of the receiver.)

December 3, 2015: LGX and others file a statement of claim seeking \$60 million in damages from the Attorney General of Canada for the alleged impacts of the EPO.

June 7, 2016: Alberta Treasury Branch (ATB) applies to have LGX entered into receivership (consent order). The main creditors of the company (at June 7, 2016) were the secured creditor, ATB at \$31,300,000.00, followed by the unsecured creditor, County of Forty Mile. No.8 at \$392,098.88 and a host of other unsecured creditors owed between \$1 to \$203,785). (See LGX Oil + Gas Inc. **Notice And Statement Of Receiver.**)

March 24, 2017: the Receiver disclaims 21 properties in which LGX was the sole working interest, and 32 properties in which it is a partial interest. (See Notice of Disclaimer of Certain Properties by the Receiver and Manager.)

November 22, 2017: the Receiver seeks

an order “declaring that the Receiver’s disclaimer of the Manyberries properties... is without prejudice to LGX’s claim for *de facto* expropriation”. This order was granted on December 15, 2017. (**Application**) Canada has appealed the declaratory order. (**Factum**)

May 16, 2018: the Receiver amends the statement of claim to seek compensation in the amount of \$123.6 million from the original \$60 million claimed.

This story of emergency protection, litigation and the bankruptcy proceeding continues...

But let’s step back. The story begins much earlier – with the history of the Greater Sage-Grouse in the Manyberries area:

1987: Greater Sage-Grouse is listed as threatened provincially in Saskatchewan.

1997: The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) listed the Greater Sage-Grouse as a threatened species in Alberta and Saskatchewan.

1998: COSEWIC lists Greater Sage-Grouse as endangered.

2000: Greater Sage-Grouse is listed as endangered in Alberta.

2003: SARA is proclaimed.

2003: Greater Sage-Grouse is listed as endangered under SARA.

September 2007: a recovery strategy under SARA for Greater Sage-Grouse is proposed.

January 2008: the initial recovery strategy for Greater Sage-Grouse is published. This includes a calendar for action plans and indications that a “**partial critical habitat identification addendum**” would be posted by December 2008 and a **finalization of Action plans by 2011**. It also notes “Alberta’s lek [areas where Greater Sage-Grouse congregate in spring for courtship] data from 1968 to 2005 show a decrease of 84% in total number of males at leks, a decrease of 57% in number of active leks, and a decrease of 64% in number of males per active lek.”

2008: Environmental groups filed an application for judicial review challenging the failure to identify critical habitat in the

recovery strategy.

July 9, 2009: the Federal Court finds in favour of the environmental groups, ordering a redrafting of the critical habitat portion of the recovery strategy. This is upheld on appeal.

November 2011: Environmental groups petition the Minister for an EPO under SARA.

The question arises, what dates are most relevant to this story? Does this story start in 2012 when assets were purchased, or in 2000 when Greater Sage-Grouse became listed as endangered in Alberta? Perhaps in 2003 when Greater Sage-Grouse were listed federally? Or in 2008 when critical habitat was slated to be published? How about in 2009 when a federal court supported an interpretation of SARA that requires a more ambitious identification of critical habitat?

If one knows SARA, there were clear flags of progressing regulatory relevance. These include timelines for critical habitat identification in the original recovery strategy and a Federal Court decision highlighting the inadequate identification of critical habitat. Why?

Certainly environmental due diligence is a part of any acquisition of oil and gas properties (or one hopes). Outstanding enforcement issues for pollution events or evidence of accidental releases would certainly raise some investment concerns. Why not the risk of a regulatory response to protect critical habitat of an endangered species? Too remote? Too unwarranted? Too reliant on

the assumption that governments don't take habitat issues seriously?

Part of the issue is how we treat habitat protection generally. In Alberta at least, it is primarily dealt with through policy, and pretty wiggly policy at that. Outside of "protected areas" there is no habitat "protection" provincially to really speak of. On the other hand, the federal government has SARA, with clear obligations on the federal government to take action, particularly for aquatic species and migratory birds. But the federal government has administered SARA quite timidly since it came into force: most glaringly the federal government has delayed publishing recovery strategies within the timelines set out in SARA and ignored (or clearly misinterpreted) the language of SARA in how and when critical habitat must be identified. Some would likely say "timid" is too nice a characterization.

This federal timidity reinforces the signal that governments are hesitant, if not inherently opposed, to take meaningful and clear action for species at risk and their habitat; lulling those who invest into a false sense of security that due diligence need not delve into issues of species and habitat.

More confounding perhaps is that many companies, large and small, probably have very limited knowledge of the Federal SARA, if any knowledge at all. So when a species actually does end up with some modicum

of regulatory protection it should not be surprising that claims arise alleging that the government is effectively stealing property.

Those who are familiar with and advocate for species and the laws that support them will note that the oil and gas company, and its creditors, may have acted imprudently in this case. Hence, it seems a bit much to blame the federal government for following its laws.

The tougher question is how to deal with habitat protections and impacts on existing authorizations/licences, where the impacts, or potential impacts, on species at risk habitat were not known. Watch for an upcoming ELC publication that will explore this issue further.

This story lays bare the clear misunderstanding or underestimation of the regulatory framework for environmental protection, particularly in relation to species at risk. Surely credit risk should depend on an assessment of regulatory factors, whether they relate to production, royalty rates, end of life obligations, or, as in this case, access to the resource. When it comes to investments and purchases of assets we should be making habitat considerations habitual. 🐾

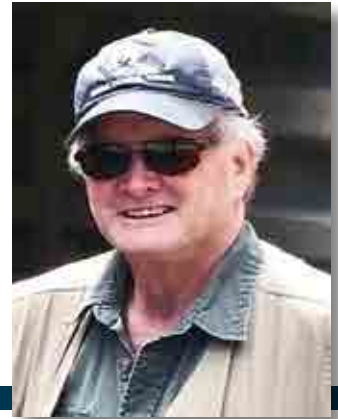
AWA would like to thank the Environmental Law Centre for permission to reprint this November 15, 2018 article from the ELC's blog at www.elc.ab.ca

Featured Art



The Global Extinction Crisis, Alberta's Native Cutthroat Trout, and Wilderness

By Dave Mayhood



Earth is experiencing an extinction crisis unprecedented in human history

The International Union for the Conservation of Nature (IUCN) reports that, as of July 2018, 26,000 species of organisms are at serious risk of extinction worldwide. The rate of vertebrate species loss alone recently was estimated, very conservatively, at 114 times higher than the background rate. That rate is accelerating, supporting a developing view that Earth has entered its

sixth mass extinction.

Yet even this extremely high rate of species loss may seriously underestimate the problem. In a huge sample of half the known vertebrate species, ecologist Gerardo Ceballos and colleagues recently reported in the *Proceedings of the National Academy of Sciences* that 32 percent of those species are decreasing in abundance and range. In 177 mammal species for which there are detailed data, all have lost 30 percent or more of their geographic ranges, and more than 40 percent of those species have shown severe

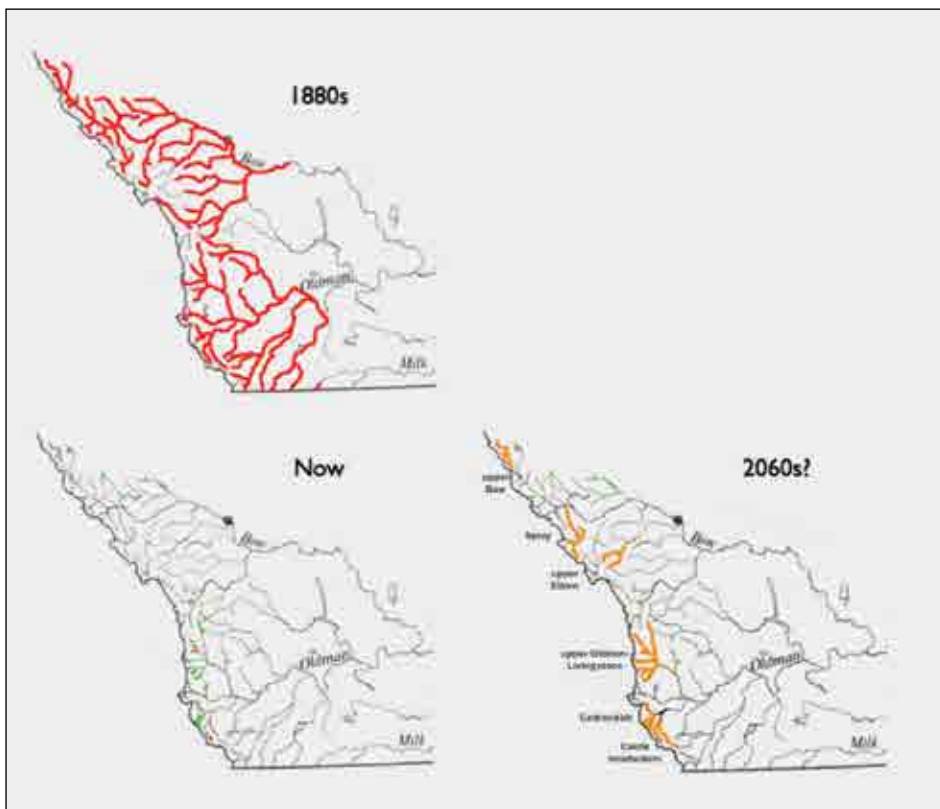
population declines of greater than 80 percent shrinkage in their ranges. The World Wildlife Fund reported just weeks ago that there has been an overall decline of 60 percent in population abundance of all species between 1970 and 2014. Ceballos and his colleagues concluded that such massive losses “will have negative cascading consequences on ecosystem functioning and services vital to sustaining civilization.”

And therein lies the great danger to humankind. Ecosystems consist of organisms and the places they live, interacting among themselves and with their physical habitats. Taken together, they are our life support system. Properly functioning ecosystems are not just nice to have, they are essential to our lives, making this planet habitable for humans. Such huge losses of ecosystem components — species and populations — as we are seeing now, signal that our life support machinery is coming apart. We urgently need to repair it.

Recovering native cutthroats: A primer of ecosystem repair

To show how complicated recovery can be, let's look at a single at-risk Alberta species to get a sense of how we need to go about recovering whole ecosystems.

Westslope cutthroat trout in Alberta once occupied the headwaters of the Bow and Oldman river drainages, extending downstream in the mainstem rivers far out into the plains. Historical records attest to their remarkable abundance. When the Canadian Pacific Railway was completed through southern Alberta in the 1880s, rapid set-



An example of large losses in population abundance due to massive range reduction: Alberta native cutthroat trout since the 1880s. Red — genetically pure native; green — apparently pure native, with some hybrid individuals, or minimally hybridized; orange — speculatively reconstructed pure stocks as part of a recovery program. D. MAYHOOD GRAPHIC

tlement became possible. Settlers heavily exploited the native fish stocks, depleted them, damaging or destroying trout habitat. On top of the depleted native trout stocks, the streams and lakes soon received heavy plantings of non-native fishes like brook, brown, Yellowstone cutthroat, and rainbow trout, all of which competed for food and space with the native cutthroat stocks. Worse, non-native rainbow trout hybridized with the cutthroats, extirpating them as a distinct species in stream after stream, and making them less fit than either pure parental stock. The competing species and hybrids have different ecological properties than the native stocks. As a result, ecosystem function has been changed in ways that we do not yet comprehend. Pure stocks of native cutthroats that still remain are small, highly fragmented populations dispersed in

cold, isolated, and small headwater streams.

Extinction is a numbers game. When a population or species is reduced to zero, it is extinct. When effective populations are small, say less than 500 to 1,000 mature adults, they are at higher risk of extinction due to lost genetic diversity by chance, and to catastrophic events like floods, landslides, fires and the like. When effective stocks are as low as 50 to 100 adults, these mechanisms are accentuated, and weakening through inbreeding becomes an additional important factor. In either case, populations are more prone to extinction the smaller they are; most pure native cutthroat populations remaining in Alberta are very small, in the low tens to low hundreds of adults. The major problem to be solved, therefore, is to increase the effective adult population size of each of the remnant pure stocks to

somewhere in the range of at least 500 to 1,000 adults.

Restoring native cutthroat stocks is complicated further, however, by the fact that they must be protected from invasion by rainbow trout genes. This usually means the rainbows or rainbow-cutthroat hybrids must be selectively removed from the trout-accessible habitat, or the pure stocks must be isolated above natural or artificial barriers. Selective removal involves serious technical difficulties so, at our present level of expertise, in most cases we are restricted to the habitat isolation approach.

The isolated habitats selected for conserving the pure stocks must be sufficiently productive, and have enough critical habitat (such as pools or emergent groundwater), to support a population of a large enough size. The habitats must have suf-



Rewilded wilderness like this formerly roaded headwater of the Elbow River, with natural barriers to upstream invasion by non-native fish species, offer opportunities to remove invasive fishes and maximize stream carrying capacity for pure Alberta native stocks of trout as part of a recovery plan. PHOTO: © D. MAYHOOD

ficient carrying capacity, in other words. Increasing productivity naturally is limited by our climate and geology; artificially increasing habitat productivity tends to be temporary and expensive. In most cases, our populations need more habitat in the form of mileage: our fish need greater lengths of stream available to them as secure habitat. Most opportunities to provide greater stream length and better habitat security generally are downstream from the remnant populations and are typically occupied by rainbows or rainbow-cutthroat hybrids. Downstream also tends to be the direction in which conflicts with resource extraction, urbanization, and grazing lie. Habitat damage, meanwhile, can be expected to foster hybridization and competition from invasive rainbow and brook trout. Secure, undamaged habitat is key to recovering this species.

But, we're not done. The remaining populations of pure native cutthroats are likely each locally adapted to their native streams and these adaptations are genetically determined. We also need to take steps to preserve genetic diversity, so we may need to add a few fish from other pure native populations to increase genetic diversity and thereby improve the fitness of small populations. But we need to be extremely circumspect in doing so. Introducing other genotypes could disrupt locally-adapted gene complexes.

These and many other complications make recovering severely depleted fish stocks extremely daunting. Such problems are the rule if we have to restore populations of any species — such as Alberta's at-risk plants, caribou, bull trout, Athabasca rainbow trout, and sage grouse — to anything like their natural state. To get a sense of why it is far better to prevent species and populations from declining to dangerously low numbers rather than to wait until they're at risk, just multiply the problems outlined above for cutthroat trout by the number of species and populations at risk that you need to recover. Globally, as noted, that number is more than 26,000 and climbing rapidly.

Wilderness: Functional ecosystems

It should now be obvious that we need a much more effective way to recover and protect at-risk species and populations. Even more importantly, we need to do more to prevent them from ever becoming at risk in the first place. Restoring and protecting wilderness offers one such way.

Wilderness is another word for functional, intact ecosystems, but you probably will not find it described that way in dictionaries or in wilderness legislation. The U. S. *Wilderness Act* defines wilderness, in part, as “an area where the earth and its community of life are untrammeled by man...An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation...” An area of wilderness, according to the Act, is one of “at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition.” Elsewhere in the Act, The Secretary of the Interior is enjoined “to review every roadless area of five thousand acres or more” in lands within his jurisdiction to determine its suitability as designated wilderness. The Act also prohibits roads within wilderness areas. Since roads are an excellent proxy for human development and “permanent improvements” it made a lot of sense for the American Congress to envision wilderness as the absence of roads.

It follows that wilderness can be maintained by the simple expedient of not allowing roads to be built into roadless areas. Lands can be returned to wilderness status by removing roads.

Lands that have always been without roads are self-maintaining ecosystems within which the species native to the wilderness area can adapt and evolve at population levels commensurate with the carrying capacity of that ecosystem. This is the very goal of conservation.

While wilderness alone cannot guarantee the safety and recovery of native species, it can go a long way toward making it possible. In an article this year in the journal *Oryx*,

conservation biologists Stephen Kearney and colleagues found that protected areas alone in Australia could remove one or more threats to 76 percent of species, but all threats only to three percent of species. With adequate resourcing (active management), a protected area network could remove one or more threats to almost all species and all threats to almost half of the species protected within it.

Two years ago, James Watson and colleagues showed alarming declines (10 percent loss over two decades) in wilderness globally: double the rate of wilderness protection. Yet wilderness preservation is likely the single most effective way of conserving large numbers of species and their individual populations. Similarly, restoring to wilderness large, partly developed landscapes that still harbour species at risk is likely to be one of the most effective means of efficiently recovering those species and restoring their critical habitats. Recent moves by the Alberta Government to do just this in the Castle Parks, the Livingstone-Porcupine area, and now in Bighorn Country, are giant steps in this direction.

U.S. President Franklin D. Roosevelt is often paraphrased as advising petitioners, “I agree with you, I want to do it, now make me do it.” By persisting over decades, AWA has followed FDR's dictum. Its longterm, persistent efforts have been important in making it possible for the government to achieve these advances. We can expect them to help conserve many of our species at risk, and to do our part in stemming the catastrophic loss of global biodiversity. 🍄

Dave Mayhood is an aquatic ecologist working on recovering Alberta's threatened native west-slope cutthroat trout and the watersheds they live in. He can be reached via his corporate website at fwresearch.ca

CORRECTION

Our biography of George Campbell in the September issue of the *Wild Lands Advocate* stated that “George was the founder and first President of the Foothills Acoustic Music Institute (FAMI).” This is incorrect. Marilyn Giesbrecht was the first President and one of the founders of FAMI. We apologize to both Marilyn and George for this error.

Getting to know Bistcho



By Carolyn Campbell, AWA Conservation Specialist

The Bistcho region, in Alberta's northwest corner, is a part of the traditional territory of the Dene Tha' First Nation and home to a threatened woodland caribou population. It is a sensitive and valuable wilderness area that deserves protection. Bistcho is still remote, with few permanent roads, and most Albertans will never travel to its expansive peat wetlands, lakes, and forests. That is a great reason to get to know it better in these pages.

The Bistcho wilderness lies in Alberta's boreal Northern Mixedwood, Lower Boreal Highlands, and Boreal Subarctic Subregions (see the map below). Its low-lying peat wetlands support mosses, grass-like sedges, shrubs and black spruce trees, while some of its uplands support mixed-wood forests. It has discontinuous permafrost soils and its subarctic climate only allows for short growing seasons. Bistcho is a patchwork of forests with vast wetland

complexes. Over the millennia since the last glacial period, these cool conditions have allowed considerable carbon stores to build up in its layers of mossy peat vegetation.

The Bistcho's peat landscape stores and moves water differently from more southerly forests. In the low-lying areas, wetlands known as 'channel fens' transport slow moving water over a peat layer that has slowly built up in former glacial meltways or stream channels. Plateaus of poorly drained sphagnum peat bogs are common on somewhat higher ground. Drainage is relatively limited in the area, giving rise to numerous shallow lakes.

The threatened Bistcho boreal woodland caribou population relies upon this landscape and its connectivity to adjoining caribou ranges – the Yates range to the east, NWT and BC caribou ranges to the north and west. With their large hooves, caribou are perfectly adapted to move through wet

and snowy areas in search of their principal winter diet of lichens. The Bistcho caribou population has been declining in the ten years since its monitoring commenced, although the last three years have indicated relatively stable numbers at lower levels. Other Bistcho boreal wildlife include moose, black bears, beavers, wolves, and weasel family members including marten, mink, and wolverines.

Intact peat wetlands are more highly resistant to drought and fire than are upland forests rooted in mineral soils. As a result, the Bistcho region could be an effective climate refuge for woodland caribou and other boreal fish and wildlife populations in the face of global warming. However, these wetland conditions also make the vegetation very sensitive to any mechanized disturbance, which can compact soils or interrupt the surface water and groundwater connections.



Bistcho is a patchwork of forests and vast peat wetland complexes that support threatened woodland caribou, store large amounts of carbon, and are very sensitive to mechanized disturbance. CREDIT: AWA, PHOTO: © C. WALLIS

All of Bistcho's flowing waters find their way to the Arctic Ocean via the Northwest Territories' mighty Mackenzie River. In the western Bistcho region, water moves through channel fen wetlands into the Pettitot River and on to the Liard River. In the eastern side, its rivers contribute to the Hay River Basin which drains into Great Bear Lake.

One of the jewels of the region is Bistcho Lake. At 426 km², Bistcho Lake is Alberta's third largest lake, after Lake Claire and Lesser Slave Lake (Lake Athabasca is largest in total area, but it lies mostly in Saskatchewan). Bistcho Lake is shallow, with an average depth of less than two metres, and it supports northern pike, walleye, and whitefish populations. Large concentrations of nesting bald eagles have been recorded around Bistcho Lake.

In recent years, the Dene Tha' First Nation initiated community-based archaeology surveys at Bistcho Lake and in other parts of their traditional territories. A major goal of the "Science and Culture on the Land" program was to involve children and youth in discovering and documenting their peoples' long connection to these lands. During the summers of 2013 to 2016, Dene Tha' elders shared information about local history and traditional sites. Youth, elders, and several participating archaeologists then explored the perimeter of Bistcho Lake. In four summers they documented over 60 sites, including some large "pre-contact" campsites dating back many centuries, below historic settlements. The elders' stories and the sites indicate a significant history of occupation by the Dene Tha'.

Around the turn of the 20th Century, Hudson's Bay Company trading posts were established throughout the area. The Dene Tha' began to adopt a more semi-permanent lifestyle compared to their earlier nomadic life. They gradually settled in small, family-based groups in seasonally-used log cabins. At the southeast end of Bistcho Lake is the site of a former log cabin village known as Dene Tha' Bistcho Lake Indian Reserve #213. It was once bustling

with families. During the archaeology summer field trips, an elder shared the information that people left that lake-side settlement in the 1930s and early 1940s because of a deadly flu outbreak. All this is to say that this landscape, like so many others in Alberta, has a rich history of use by Indigenous people beyond what many of us are aware of.

Bistcho currently has no protected areas. In order to safeguard this irreplaceable landscape, AWA believes that most of the Bistcho region should be formally protected as a Wildland Provincial Park, based on the collaborative model used to establish Hay-Zama Lakes Wildland Provincial Park in 1999. Hay Zama is an internationally significant lake and wetlands region south of Bistcho. Its Wildland Provincial Park began with a Management Committee partnership with the Dene Tha' First Nation, the Alberta government, industry representatives, and AWA. The Management Committee achieved an initial reduction of the energy industry's footprint, oversaw the accelerated extraction of the oil and gas reserves, and it is now monitoring the reclamation. When AWA attended a 2008 ceremony hosted by the Dene Tha' to celebrate Hay Zama Wildland Provincial Park and its international twinning with a Mongolian wetlands protected area, local people expressed support for the idea of a protected area for the Bistcho Lake region.

Bistcho is currently managed as multiple use public lands. Alberta's Forest Management Unit (FMU) F20 extends for 8,700 km² over much of the area; its remoteness and sparse commercial forestry prospects mean that there is no forestry tenure in FMU F20 other than a very small deciduous permit. Historically, leasing of oil and gas tenures produced extensive seismic line disturbance, most of which have not been successfully reclaimed because of the weak standards of the day. More recent restoration techniques offer considerably more potential to restore legacy disturbance in this sensitive landscape. There is almost no active oil and gas development to the north and west of Bistcho Lake, but

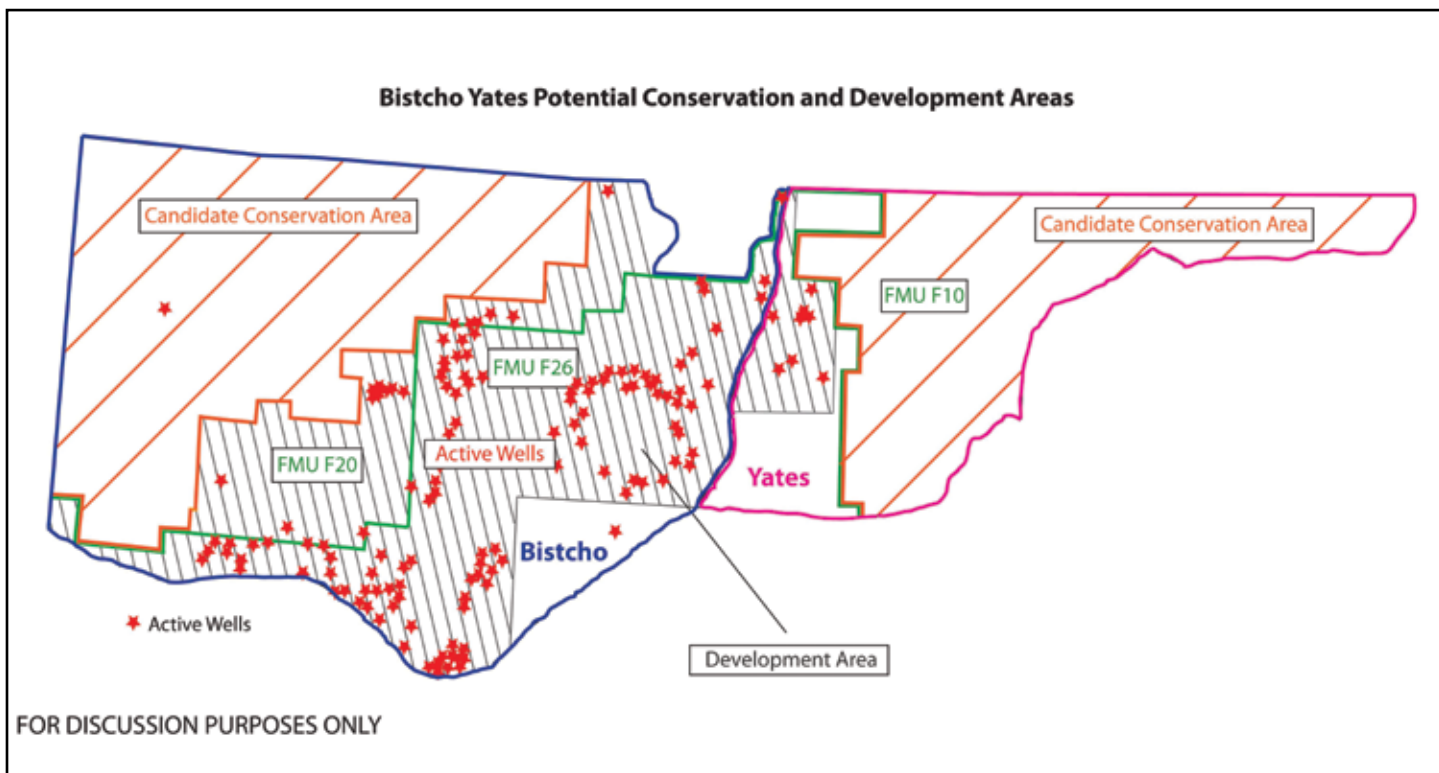
there are some active leases to the east and south of the lake.

In 2012 the Alberta government placed a moratorium on new mineral tenures over much of the Bistcho and Yates caribou ranges. The Bistcho caribou range area extends considerably southwest of the Bistcho Lake area and eastward into the Cameron Hills; the adjacent Yates range extends further east along Alberta's border with NWT to Wood Buffalo National Park. This was a very positive measure for maintaining some connected caribou conservation options for the Lower Peace regional plan.

Even though the Lower Peace plan has not moved forward, some recovery measures for Alberta's threatened woodland caribou have. Habitat fragmentation from excessive surface disturbance by extractive industry is the primary cause of woodland caribou declines. According to the Alberta government's December 2017 report, 32 percent of the Bistcho caribou range is disturbed by wildfire, and 91 percent is disturbed by human industrial activities, mostly from historic seismic lines. The best available scientific evidence, as documented in the 2012 federal boreal woodland caribou recovery strategy, is that woodland caribou require at least 65 percent undisturbed habitat to have even a 60 percent chance of being self-sustaining.

New energy leasing was finally halted in all Alberta caribou ranges in summer 2015. That pause has offered a welcome reprieve to develop action plans to manage habitat for caribou recovery. However, Alberta has not yet finalized any caribou range plans and new surface disturbance from existing energy leases continues in already excessively disturbed areas of Bistcho and other ranges.

In June 2016, Alberta committed to establish one Wildland Provincial Park in Bistcho, in unallocated Forest Management Unit (FMU) F20, and another in Yates' unallocated FMU F10. AWA welcomed this decision to benefit caribou and other valued wildlife. Essentially no forestry tenure would be affected and ex-



Economist Dr. Tom Power concluded that managing lands for caribou recovery – including two new conservation areas, a development area and a habitat restoration program – can grow the economy in the Bistcho-Yates caribou ranges. CREDIT: GOVERNMENT OF ALBERTA MAP, RE-FORMATTED BY POWER CONSULTING INC.

isting energy leases could continue under a careful management regime such as was established in Hay Zama. In August 2017, AWA presented at a caribou open house hosted by the town of High Level and Mackenzie County, which includes both FMUs. We discussed the low cost and high values of F20 and F10 caribou protected areas. We also noted that a program to restore unreclaimed legacy seismic lines could be an economic boon for the region.

In December 2017, Alberta proposed to establish protected areas in about 75 percent of F20 (after removing portions with some potential energy activity) and all of F10 in its draft provincial caribou range plan document. These Bistcho and Yates candidate conservation areas were also included in discussion scenarios presented by the Alberta government at March 2018 stakeholder workshops (see the map above). Unfortunately, soon afterwards the provincial government announced that it had suspended work on these protected areas because local communities perceived there to be high costs to their local economies from protecting F20 and F10

and from recovering caribou habitat.

In the summer of 2018, AWA partnered with David Suzuki Foundation and Harmony Foundation to commission a study of the economic impact of protecting and restoring woodland caribou habitat in the Bistcho and Yates caribou ranges. The report was authored by eminent natural resource economist Dr. Tom Power. Published in October 2018, it concluded that at least 65 percent undisturbed caribou habitat could be reached in the Bistcho-Yates ranges, including the F20 and F10 proposed conservation areas, with virtually no displacement of existing industrial activity. It found that a reasonable Bistcho-Yates seismic line restoration program would generate a solid employment opportunity for this region. It also assessed a 2017 report by northwest municipalities and concluded that flawed assumptions in that work had produced exaggerated cost projections for caribou habitat conservation. The Power report recommended that, for all caribou ranges, we begin with shared goals of caribou recovery and community economic activity

and proceed to build optimized solutions offering the least costs and most benefits. Protecting most of F20, but allowing some parts of it to remain as strictly-managed energy development zones, would be an example of optimizing a range plan for caribou recovery as well as local economic development, which AWA supports. We will continue to raise awareness of the valuable findings of this study.

In late October 2018, AWA was pleased to learn that the Dene Tha' First Nation and Canadian Parks and Wilderness Society are proposing to create an Indigenous Protected Area for the F20 area identified by the Alberta government as a candidate conservation area in December 2017. A key part of the concept is to include Dene Tha co-management. This sounds like an excellent proposal and we look forward to learning more about it. AWA will encourage the protection and restoration of the valuable Bistcho region, to support wildlife habitat and Indigenous uses and cultural practices on these lands. 🐾



If a Tree Falls... Listening to Alberta's Forests



By Grace Wark, AWA Conservation Specialist

“If a tree falls in the forest and no one is around to hear it, does it still make a sound?”

This is a riddle for the ages. Philosophical debate has raged for nearly 300 years as to whether something really occurs if no one is there to witness it. Philosopher George Berkeley first speculated that “the objects of sense exist only when they are perceived; the trees therefore are in the garden [...] no longer than while there is somebody by to perceive them.” Berkeley, while not entirely straight forward in his explanation, followed the general stream of thought that we should question whether something exists or happens if we do not perceive it. This, in the realm of conservation, is a familiar challenge.

Many great minds have attempted to answer the riddle, providing philosophical and scientific explanations alike. From a scientific standpoint, when a tree falls in the forest it will cause a vibration, and that vibration will only become a sound when it's perceived by an ear. Sound, by definition, is the movement of vibrations through the ear canal to the eardrum, passing through the ossicles to the inner ear, then on through the cochlea. Only when the cochlea converts the vibrations into electrical signals and those signals are recognized by the brain, is a vibration considered a sound. So if no ears are there to hear it, a falling tree will make no sound – at least, so says science.

Canadian singer-songwriter Bruce Cockburn poignantly adapted the age-old query into his 1988 conservation anthem about



Albertans have long known that the health of the watershed is directly tied to the health of the forest
PHOTO: © N. DOUGLAS

deforestation, *If a Tree Falls*. Cockburn extended the focus of the question from the fate of a single tree to that of forests. Was anyone hearing the forests of Sarawak, Amazonas, and B.C. fall? Cockburn called into question whether enough of us were in fact paying attention to what our forests, and the Indigenous and wildlife populations dependent on them, endured. “Cut and move on” described the industrial approach to forests, an approach that destroyed wildlife and the lives of Indigenous Peoples alike and left “brand new flood plains” and “new deserts” in its wake. That reality is too often as serious today as it was in 1988 (Brazil just released figures showing its deforestation rate to be at its highest level since 2008).

The falling tree riddle has actually been used repeatedly to shed light on conservation issues. Beyond being a catchy hook for an environmental anthem, Cockburn reminds us that the physical distance between forests, commercial logging, and urban centres often places forest management issues out of sight (or earshot), in-

creasing the possibility that they may be out of mind.

However, I believe many Albertans actually have their ear to the ground for Alberta’s forests. Many feel that increasing demands and overlapping land-use pressures demand we re-examine the way our forests are managed.

The crux of the problem is deciphering what we’re hearing and observing. Here is where what’s responsible for that falling tree matters. Feller buncher? Beaver? Wind? Mud slide? Each of these causes may tell us a range of things about the health of the forest.

What do we see and hear on a walk through the woods and how do we interpret what we record? More importantly, what are the implications for the future of Alberta’s forests?

Stand or move quietly in the forest for a moment and listen for the sound of water. Perhaps it will be the squish of a mossy carpet or the low roar of a nearby falls.

Look and listen for it because water is one of the most conspicuous indicators of for-

est health; the integrity of the watershed is inextricably tied to that of the forest. This is because of how water cycles through the landscape; first, it is intercepted by the forest canopy, then, some of it will be absorbed through the soil, and finally, it will percolate down into the river valley. Take away the forests and you remove an important filtration system, as the forests slow the flow of water and prevent it from picking up excess sediment, pollutants, and other unsavory substances. This is why a consistently murky, sediment-laden river is a telltale for an overextended forest.

Look and listen again as you approach a favourite backcountry lake. Now silence now greets you where you once heard the splash of trout. Rising water temperatures contribute to that silence. Clearcutting not only increases sedimentation into fish-bearing streams and chokes spawning habitat but it also may alter stream temperatures. This is because stream temperature emulates the sub-soil environment; fewer trees means greater sun exposure, and warmer slopes means warmer waters.



Between 2001 and 2012, Alberta lost 12 percent of its tree cover, equivalent to 4.58 million hectares of forested landscape. PHOTO: © N. DOUGLAS

Now use your imagination. Imagine first the faint sounds of a woodland caribou's broad, cloven hooves on the forest floor, followed soon by the soft pads of wolves. Is this as it should be? Where woodland caribou once had hectares upon hectares of old growth forest to help evade predators, they now traverse a landscape characterized by many linear "highways" and open spaces. Linear disturbances – roads, trails, cutlines and pipelines – fragment the forests and invite greater traffic. Where human traffic often takes the form of barreling log-hauls and rumbling weekend warriors, animal traffic comes as a hungry wolf on the trail of a disoriented caribou. While this is good news for the wolf, it alters the balance of the food web and may lead to serious declines in prey populations.

What does our record of sounds and silences tell us? Frankly, the answer isn't always straight forward. But I think it's fair to say the record signals the overdevelopment of our forests and their deterioration. This record invites us to act, ironically perhaps, by not acting on forests as much. Most de-

clines in condition could be remedied by giving our forests... more forest. A good first step would be to claw back the intensity of development and prioritize, temporally and geographically, the range of land-use we impose on the land.

Above you'll see a passing reference to deforestation in Brazil. While I wouldn't suggest that Alberta's deforestation record is as severe as Brazil's, we know that Alberta lost 12 percent of its tree cover between 2001 and 2012. This is equivalent to 4.58 million hectares of the forested landscape. We also know that timber harvest has gained serious momentum over the past century. Where in 1896 there were 30 to 40 timber permits for the Eastern Slopes, there are now 264 commercial timber permits operating in Alberta, in addition to timber allocated under Alberta's 20 Forest Management Agreements (FMAs). The lumber production trend over the last decade is upwards; in 2017 Alberta produced an average of 779.6 thousand cubic metres of lumber each month compared to a monthly average of 636.2 thousand cubic metres in 2007. This was an increase of

22.5 percent.

Combine this with declines in global and Canadian biodiversity levels and there's a powerful argument that something needs to be done. The World Wildlife Fund's *Living Planet Report Canada* reported recently that half of the Canadian vertebrate species suffered population declines between 1970 and 2014. Of that half, populations have declined a staggering average of 83 percent.

In conclusion, does it matter whether the answer is yes or no to the question I opened this article with? I think that, more importantly, we have a stewardship duty to ensure the health of our forests so that, if we're fortunate enough to stand under their canopies, we will be able to hear the symphony of sounds they offer. Healthy forests will be ones distinguished by the roar of the headwaters, the hoots of the horned owl, and the offerings of other players in the natural world.

The benefits of our forests are far-reaching and we should be loud in offering them our steadfast support. 🌲



Our forests offer a constant stream of information. It's simply up to us to listen, and to decide what to do with what we've heard. PHOTO: © H. UNGER

The Foothills



By Nissa Petterson, *AWA Conservation Specialist*

What's the best way to describe Alberta's foothills to someone who has never seen them? They are a unique geographical feature in Canada, found only within parts of western and central Alberta and a small northeastern segment in British Columbia. One could think of the foothills as lands where two different Natural Regions meet or collide; a place where the Rockies and the boreal forests of Alberta abut.

Consequently, the Foothills Natural Region is a transitional ecosystem. It begins at the eastern edge of the Rocky Mountains, or *piedmont* (the French word for "at the foot of the mountain"), and fades northward into the boreal forest. The region is characterized by both steeply sloping and gently undulating hills. The rocky outcrops and rolling fields of the foothills are generally cloaked with a mix of coniferous and deciduous trees, like a royal carpet of green laid at the feet of the majestic Rockies.

The Foothills Natural Region is further divided into two subregions: the Upper and Lower Foothills. These subregions are distinguished according to criteria such as climate and vegetation.

The topography of the Upper Foothills Natural Subregion ranges from steeply sloping to rolling hills, covered by coniferous forests. Thick stands of lodgepole pine dominate the southern forest, while a typical northern forest is composed of black spruce and white spruce. Tree stands in the Upper Foothills generally have a less diverse shrub understory. That understory's common species include Labrador tea, green alder, and juniper as well as a ground

cover of feathermosses.

As you descend in elevation, the terrain becomes much gentler and a broader range of vegetation begins to appear on the landscape. The Lower Foothills Natural Subregion is the most diverse in Alberta in regards to forest types and tree species; white birch, balsam poplar, lodgepole pine, black spruce, white spruce, and aspen appear as pure or mixedwood stands on various hills and slopes. The understory is a mix of shrubs and many wetlands constitute approximately 20 percent of this area.

The fact that the Foothills Natural Region is a transitional zone may help to explain why it covers only approximately 10 percent of our land base. However, what it lacks in size it makes up for in biodiversity. The foothills are home to many animal species native to the Rocky Mountain or Bore-

al Forest Natural Regions. Ungulates, such as elk, moose, deer, mountain sheep, and even threatened woodland caribou trickle into these hills, supporting populations of large predators such as grizzly bears, black bears, wolves, and cougars. The Foothills are a dream come true for anyone who loves wildlife.

The Foothills' waters do not lack in species richness either. The rivers, streams, and creeks are fresh and cool providing important spawning habitat for bull trout, arctic grayling, mountain whitefish, Athabasca rainbow trout, eastern brook trout, and westslope cutthroat trout.

The Foothills promise to surprise you when it comes to wildlife encounters. They were the first place I ever saw a grizzly bear. I remember one summer weekend when I witnessed a close encounter between my



Flyover showing the level of surface disturbance in the foothills of AWA's Bighorn Area of Concern.
PHOTO: © H. UNGER

dad and a black bear. Dad was making lunch outside on a portable stove when he turned to shoo away what he thought was a pesky black lab that had wandered into our campsite. Needless to say he was mistaken. We cleared out of the area pretty fast, but still managed to enjoy our lunch while watching the black bear roam around.

As this anecdote and the paragraphs preceding it suggest, the Foothills are clearly a prime area for recreation. The landscape offers some of the best hiking, rafting, fishing, hunting and camping in Alberta. Most of my outdoor adventures as a youth took place in Alberta's foothills. Growing up, I always remember my family spending hours of our all-too-short summer weekends trying to find that perfect camping spot. And when we found that spot, I felt like I was slipping back into a pleasant reoccurring dream – so familiar and welcoming. It was marked by the calming silence and smells of the growing forest or by the rush from the cool mountain water flowing by me as

I waded further into the stream for a better cast. My dreams were made of this and Alberta's foothills never disappointed. Today, these idyllic settings still exist but they're becoming rarer every day.

Over the past few decades, the foothills have become increasingly fragmented, altered, due to a surge in industrial exploration, development, and industrial scale clear cut logging.

According to the World Wildlife Fund (WWF), "there is virtually no completely undisturbed habitat in this ecoregion," nor do any "unaltered large habitat blocks" remain. These circumstances translate into habitat loss and degradation for many wildlife species. Sensitive wildlife species such as woodland caribou are a prime example of how Alberta's current lack of cumulative effects management in areas of intensive industrial development such as the foothills contributes to the decline of caribou populations and likely accelerates the loss of biodiversity within our province. The Little

Smoky and A La Pêche woodland caribou herds, whose entire ranges exist within AWA's Little Smoky Area of Concern, have 100 percent of their range tenured for forestry, while petroleum and natural gas tenures cover 95 percent and 97 percent of the A La Pêche herd's winter range and the Little Smoky caribou range respectively. Within these ranges, woodland caribou select for old growth forest and wetlands as their primary habitat which, once destroyed, are very difficult to restore. The loss of this habitat also eliminates a significant amount of genetic diversity found within old growth tree stands in addition to reducing the environment's capacity to store carbon through wetlands. By failing to protect critical habitat for a visible umbrella species such as woodland caribou, we also compromise the futures of other sensitive wildlife species, such as our native trout.

Although grizzly bears are considered to slightly more tolerant of human activity than woodland caribou, Alberta's grizzlies are also



Jarvis Lake in the southern foothills of AWA's Little Smoky Area of Concern.
PHOTO: © C. CAMPBELL

facing great risks to their future place on this land. The rates of human/bear conflicts and subsequent bear mortalities continue to be a problem within the foothills and there are serious weaknesses in the latest version of the province's draft recovery strategy. Our seemingly ever-growing network of routes in bear country continues to threaten the security they have found in the refuges of the foothills and Rockies. Human access into previously inaccessible wilderness has been aided by industrial linear disturbances such as access roads and seismic lines throughout the foothills, further compounding the negative impacts of these industrial activities on the environment and wildlife. The latest version of a draft recovery strategy for grizzly bears measures motorized access according to "open roads" rather than the far more inclusive standard "open routes" which further legitimizes our increased access.

So, with less than two percent of the foothills protected, how do we save this natural region? Well, we took one step in the right direction towards the end of November; the provincial government announced its intention to create a Bighorn Wildland Park, a park that will offer some much needed additional official protection to the foothills. With an increase of 400,000 hectares of land, the government says protecting the Bighorn will boost Alberta's protected areas total to 15.2 percent from 14.6

percent. While maps suggest much of these new lands are in the Rocky Mountain Natural Region, some of the anticipated new and expanded parks and recreation areas will be found in the foothills. Although, even with a protected Bighorn, the level of protection within the foothills will still remain remarkably lower than other natural regions, and will not meet the ambitions of natural region representativeness for Canada's 2020 protected areas goal.

In reflecting on the history and the current status of the foothills, there are three recommendations AWA would like government to follow:

- 1) Increase the number of protected areas within the foothills. Constituting 10 percent of provincial lands, at least 10 percent of the foothills should enjoy protected status. This would realize the representativeness goals of Canada's 2020 protected areas target. Protecting river valleys, which are plentiful in Alberta's foothills, could also make a significant contribution to increasing our protected areas network and enable wildlife movement. These river corridors are not only important for water quality and wildlife habitat, but they also serve as animal highways that connect wildlife populations in adjoining regions.
- 2) Create stricter limits for linear disturbances and the level of access into

wilderness areas. While having more protected areas within the foothills is important, how we manage these areas will define the success of our conservation objectives. If we do not limit the level of linear disturbance from industry and recreation activities, it becomes far more difficult to achieve conservation goals for at risk species such as woodland caribou or grizzly bears.

- 3) Lastly, when considering the level of disturbance that has already taken place in the foothills, Alberta needs better restoration efforts. Restoration programs should help return the landscape as close as possible to its previous state. This would encourage displaced wildlife to return. Extensive restoration efforts may also have economic benefits by creating long term employment opportunities for nearby communities once projects have ceased.

I want to continue to enjoy the foothills. I believe we have a duty to conserve it for generations to come. It's not only important to the economy, but I truly believe it is also important for our overall well-being – both our body and spirit need the wilderness to thrive. I wish for others to have the same opportunities as I had growing up, but in order to guarantee this, protecting the foothills and other valuable wilderness needs to be more of a pressing issue for our communities now.

In hopes to start a dialogue and to increase awareness of underrepresented natural areas, such as the foothills, AWA has recently launched the Wilderness Roadshow to provide a learning opportunity about Alberta's public lands and the need to increase our protected areas network. To date, we have visited schools and interested groups across Alberta hoping to engage with people about the importance of conservation in Alberta and create a greater momentum towards achieving and surpassing Canada's 2020 protected areas target. We plan to continue the conversation well into the New Year, and to present local communities avenues to become more involved as active agents for change. 🐾



AWA conservation specialists Grace Wark and Nissa Petterson presenting as a segment of the Wilderness Roadshow: "Caribou and You!". A total of 75 children from École Camille J. Lerouge participated in AWA's presentation.

Protect the Parkland Dunes



By Joanna Skrajny, *AWA Conservation Specialist*

It was an idyllic morning in early July, the summer sun already high up in the sky, the air sweet and fresh, as we headed out on an AWA hike led by Cliff Wallis to the Wainwright Dunes Ecological Reserve. The group, consisting of provincial biologists, AWA members, conservationists, and local leaseholders, hailed from all over the province. The trip to reach the Wainwright Dunes, located in east-central Alberta near the Saskatchewan border, involved a four hour drive for those travelling from Calgary and Edmonton, a short drive across a series of prairie roads in varying conditions, and a two kilometre hike to reach the border of

the reserve.

By this point, my interest was thoroughly piqued – what was this place? What was so special about it that it drew in a diverse and passionate group of people from all over the province to this non-script place?

However, as soon as we set out on our hike, my curiosity became pure joy. Our morning began by traversing through aspen groves, the underbrush dappled by the sunlight breaking through the canopy. Bees happily buzzed away around the wildflowers underfoot. As we broke our way through the forest, wetlands alive with birdsong and rolling hills of grasses

greeted us. Cliff then guided us across a large wetland complex by means of the enormous beaver dam which created it. As the sun rose in the sky, we wove our way back into the aspen stands and then came upon a series of sand dunes, dunes formed from glacial deposits subjected to battering winds.

As equally bright as the sun overhead was the beaming smile on Cliff's face throughout the day. It was so obvious to anyone looking at him that this was one of his favourite places to be. I couldn't help but agree, feeling that I had returned to a place that felt so right. It was invigorating.

This trip to the parkland reminded me



Making our way across logs carefully arranged by nature's most industrious wetland architect. PHOTO: © J. SKRAJNY

of my childhood exploring and playing in stretches of grasslands and stands of aspen. Endless summer days were spent playing hide and go seek under their trembling branches. On Sunday afternoons we'd go down for a family walk, bike ride, or take a picnic in the park.

Of course, I didn't appreciate the parkland then – at least not for its natural features. I loved going camping and hiking, but I viewed the mountains as where Nature was at her best.

Over the years, the landscape of my backyard wildland changed. The grasslands were torn up to make way for a highway; the park where we played among the aspens was boxed in by bigger homes.

It wasn't until I visited the Wainwright Dunes that I'd realized what I'd lost. Lazy summer evenings serenaded by singing birds and frogs; winter days crunching through a snowscape dotted with tracks of all shapes and sizes.

The more often we see the things around us - even the beautiful and wonderful things - the more they become invisible to us. That is why we often take for granted the beauty of this world: the flowers, the trees, the birds, the clouds - even those we love. Because we see things so often, we see them less and less.

- Joseph B. Wirthlin

The Parkland Natural Region extends in a broad arc from the southern Rockies to east-central Alberta, where Alberta's prairies meet the forests of the boreal and Rocky Mountains. As the transition between two incredibly different ecosystems, the Parkland is exceptionally diverse in both landscape and vegetation. The Parkland Natural Region has three distinct Natural Subregions within it, distinguished by their geographic location: the Peace River Parkland in the north, Foothills Parkland to the east of the Rocky Mountains, and Central Parkland stretching in a north-easterly arc from Calgary to

the Saskatchewan border at Lloydminster.

Home to the municipalities of Calgary, Red Deer, and Edmonton, the Parkland is also Alberta's most populated Natural Region and has extensive agricultural development. Estimates suggest that about 90 percent of the Peace River Parkland subregion, 92 percent of the Central Parkland subregion, and 75 percent of the Foothills Parkland subregion is privately owned.

Since so many Albertans live, work, and play in the Parkland Natural Region, I am certain that my childhood story is one that is shared by many of my generation. A backyard haven, river valley, or pathway has tasted "progress." Those refuges have made way for development and are now so overused that they have become shadows of their former selves. AWA leads regular 'pilgrimages' to the Wainwright Dunes not only because of its splendour and unique ecological values. It is also because of the sobering reason that it is one of the only protected areas located within the Parkland Natural Region.

Currently, only 0.9 percent of the Parkland Natural Region is protected. It's no coincidence that only an estimated five percent of the Region's natural vegetation remains. Now, more than ever, it's important to protect the wild spaces left within the Parkland.

While at 28 km² the Wainwright Dunes Ecological Reserve is relatively small, it is part of a larger patchwork of public lands that AWA refers to as the Parkland Dunes. As its name suggests, these dunes are located largely within the Parkland Natural Region.

Thanks to its unsuitability for agriculture and relatively remote location, the Parkland Dunes has become an oasis in an otherwise developed landscape. Grazing, the area's primary land use, has conserved the native vegetation of the area. This is a great thing because the Parkland Dunes packs a lot of "ecological punch," containing a wide variety of distinct landscapes that makes this area uniquely rich in biodiversity.

The first distinct "region," the northern

half of the Parkland Dunes (containing C.F.B. Wainwright along with Wainwright Dunes Ecological Reserve), is distinguished by its extensive sand plains and dunes, grasslands, and aspen groves. It also contains a high variety of wetland types including patterned and sloped fens. These unique wetlands are often metres deep, fed by groundwater springs and rich in organic matter. One such sloped fen in Wainwright Dunes feeds into David Lake, which is an important area for waterfowl.

Other lakes within the Parkland Dunes include Sunken Lake, Sounding Lake, and a cluster of unnamed lakes. Ranging from slightly to strongly saline, many of these lakes dry up during the summer and are an important breeding area for bird species including the endangered piping plover. These lakes critically contribute to the area's importance. The Parkland historically contained countless small lakes and wetlands which supported a suite of plant and animal species and served as important water storage during periods of flood and drought. It is estimated that 60 percent of the wetlands from this natural region have been lost, largely due to draining and conversion for agricultural use.

Finally, the Neutral Hills, located in the southeast portion of the Parkland Dunes, contain a series of "ice thrust ridges" which are sheets of bedrock which were folded by glacial activity into discontinuous hills. Also found in the Neutral Hills are erratics and steep coulees formed by erosion processes. Unsurprisingly, this diverse topography provides habitat for many unique plant and animal species. The Neutral Hills also holds significance for Indigenous Peoples as an important hunting ground and location for winter camps. Tipi rings, arrow heads, and cairns are common artifacts found here.

While there are many ecological reasons for protecting the Parkland Dunes, there also are more sociological and practical reasons for conserving this landscape.

To begin, there is an opportunity to advance protection of the Parkland Dunes within the North Saskatchewan Region-

al Plan under the Land-use Framework. According to this plan, the government is required to identify and create new protected areas. Part of the process involves appointing an Advisory Council, which among other things, will provide advice on whether the Council believes the government should proceed with protecting areas the government has identified as significant.

It's clear the government recognizes the critical need to increase protection of the Parkland Natural Region. In background documents submitted by the provincial government to the North Saskatchewan Region's Advisory Committee, provincial biologists noted that "the North Saskatchewan Region is essentially the only region that can fill representation gaps in the Central Parkland natural sub region on public land".

There was a consensus in the Advisory Council supporting the province's assessment and the Council consequently

agreed with the protected areas proposed by the government. Unfortunately, the areas the government proposed for protection are small and fragmented. There exists a much larger piece of public lands within the Parkland Dunes that could be conserved.

Protection of public lands within the Parkland Dunes and the surrounding area could potentially protect up to 930 km², which would increase protection of the Parkland Natural Region from a paltry 0.9 percent up to 2.4 percent. While this total is still insufficient, the increase would be significant.

Conservation science tells us that protecting larger landscapes is beneficial in order to help maintain their ecological integrity. It makes sense. Wildlife needs room to roam and survive, and so a small patch of land just isn't going to cut it for maintaining an area's ecological function. Even if not all of it remains in its natural condition, protecting a larger, largely

functional piece may help prevent further degradation.

In short, protecting a larger piece of the Parkland Natural Region may help conserve what makes it "parkland" in the first place.

The lands identified by AWA constitute a critical piece and objective, not least because the Parkland Natural Region is unique to North America. Indeed, Alberta contains the largest remaining blocks of Parkland in the world – the Parkland Dunes block and the Rumsey block. I believe we have a moral obligation to protect what is uniquely ours so that others may know and benefit from it too.

AWA has recommended protecting the Parkland Dunes as a Heritage Rangeland, which would maintain the stewardship that grazing has provided, while simultaneously conserving these landscapes for future generations. This designation would result in minimal changes to the current status quo of the area while si-



The Parkland – where the grasslands meet forests. PHOTO: © J. SKRAJNY

multaneously protecting this landscape from further destruction. It would prevent future surface disturbances such as drilling, renewable energy development, and road building. These activities pose serious threats to the integrity of the area

by further fragmenting habitat, destroying native grasslands, and introducing invasive species.

The final and perhaps the most intuitive reason for protecting the Parkland Dunes is to provide the opportunity to reconnect

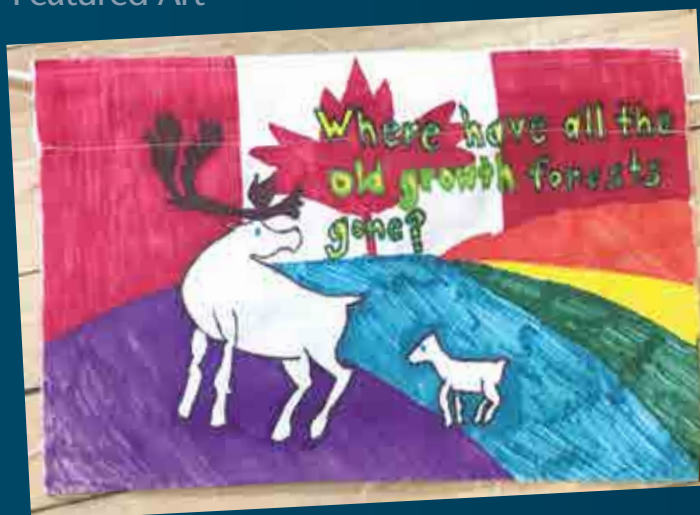
with a landscape that is so unique, so vibrant, and so unabashedly alive. It would do a lot of spiritual good for Albertans to know and take pride in a landscape that is one they knew and loved as kids. ▲



AWA's 932 km² Parkland Dunes Area of Concern stretches from the Canadian Forces Base (C.F.B.) Wainwright in the north to Sounding Lake and Neutral Hills in the south. MAP: © AWA



Featured Art





Louise Guy Poetry Corner

In this issue we are pleased to republish Ben Murray's poem "Wilderness Pass" and Bryan Smith's poem "Crocus."

Ben's poem won the 2015 Louise Guy Poetry competition while Bryan's won the 2016 competition.

WILDERNESS PASS

woodpeckers knock
and we enter
wilderness of firs

forget what's left
behind, nothing now
but breath of bear
sun's sigh
bark eternity

our tracks pace
yesterday's moose, we walk
its shaggy shadow

listen: quiet only woods
can make, our whispers
rustling leaves

your boondock smile
another shimmer of sun,
I share it
with the trees

backpack sweat
and stiffened limbs,
a day wandering
in wonder

under green canopy, under
eye of tonight's moon
we rest
upon pine needle beds

arms open, we embrace
a visible forest
of stars

CROCUS

As winter sheds its icy cloak
And yields itself to springtime breeze
Through melting snow the sun rays soak
Unlocking old man winter's freeze
And sprouting crocus gaily shout
In violet colour all about

The circle that is life on earth
Renews itself each coming spring
When nature celebrates each birth
And prompts the meadowlark to sing
The song of promise sweetly said
Rejuvenation waits ahead

WILD WEST SALOON

On Friday September 14th AWA held its annual Wild West Saloon at the Hillhurst Cottage School. It was a wonderful success! Our guests had a tremendous time, the food from Soul Kitchen and Yummy Churros was excellent, the music lifted spirits; the smiles and laughter of volunteers and guests alike generated a tremendous atmosphere.

We raised about \$11,000 on our sales through the auction and at the amazing bake table – thanks to many of your fine homemade gifts! Sponsorships and ticket sales added approximately another \$12,000. Thanks to everyone who made this such a special evening. (photos by K. Mihalcheon and D. Morasch)





How Many Bucks Does it Take?

By Christyann Olson, AWA Executive Director



Time flies by and it really doesn't seem very long ago that I last wrote this annual column reporting on how AWA is managing financially. For AWA, 2018 has been a year of achievement and recognition tempered with some discouragement and struggle. Through good and difficult times alike, we have been energized by you, our supporters. There is no question the day-to-day work we do is sometimes very hard; it always requires tenacity and a belief we are making a difference.

Through the course of two decades, AWA has worked to become frugal, nimble, transparent, and resourceful. We have always been grateful for your support. Twenty years ago we struggled to meet payroll for a single part-time employee. Today our budget is close to \$700,000. One might ask how we realized that growth; it has only been possible because we can depend on our faithful supporters who believe in the work we do.

Generally, our operating revenue comes

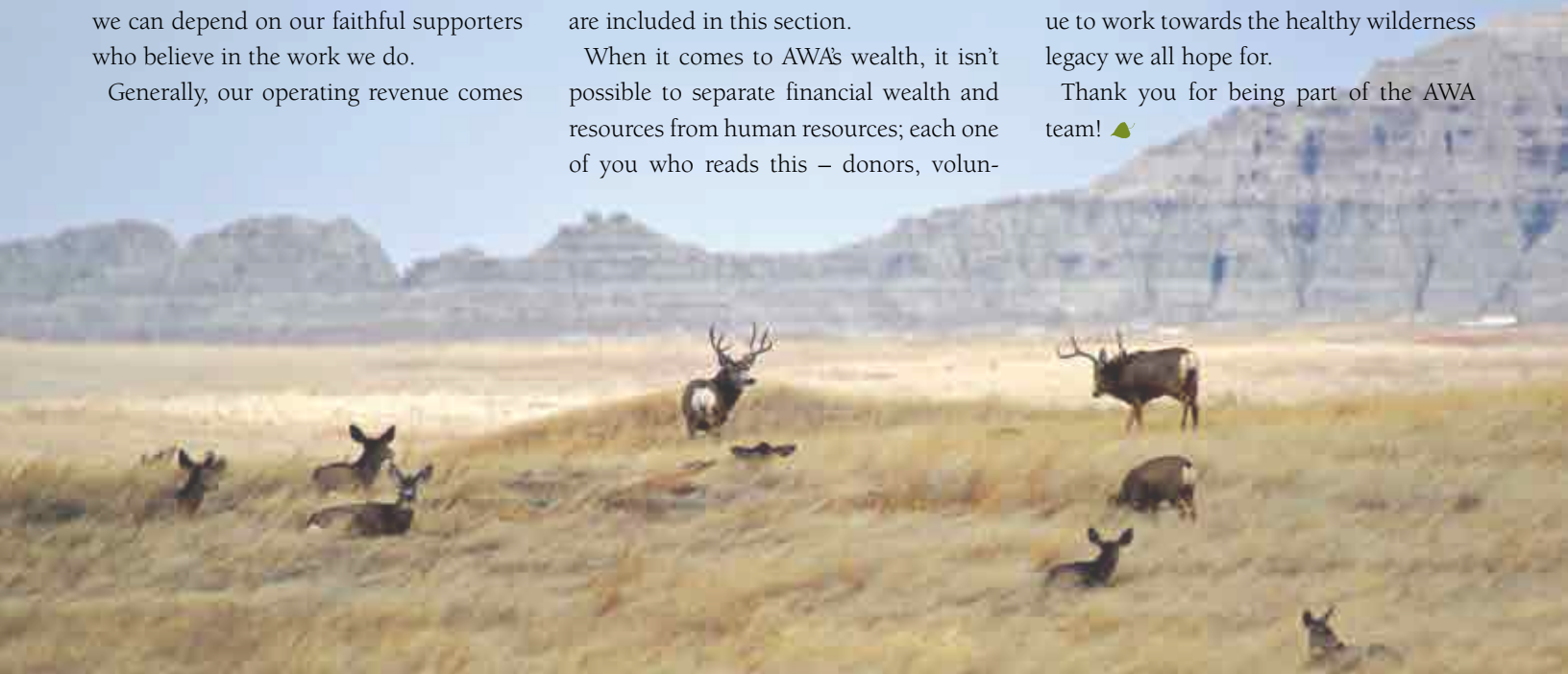
from donations, fundraising events, and grants. In this past year 83 percent of our total revenue came from member and supporter donations and events. We devoted 76 percent of our revenue to wilderness stewardship, conservation, and outreach. This includes funding the Roger Creasey Wilderness Resource Centre (AWA's library named in Roger's memory). General and Administrative expenses account for 12.5 percent of our funds and more than represents an efficient and carefully managed association, supported significantly by volunteerism. The balance of our funds is dedicated to development – the costs incurred in developing our core values and creating broader awareness of the Association and its mandate, "Defending Wild Alberta through Awareness and Action." The costs of seeking more members and supporters, as well as applying for grants are included in this section.

When it comes to AWA's wealth, it isn't possible to separate financial wealth and resources from human resources; each one of you who reads this – donors, volun-

teers, board members and the outstanding staff who work tirelessly as your team – are part of those vital human resources. From AWA's humble beginnings to the strong force it is today, there is no question we are about people. Our membership has grown and stands at 5,792 voting members with additional strength provided by the more than 1,500 supporters who are not members but donate funds to ensure our strength. Our membership resides in 211 Alberta communities plus numerous communities from Canada and around the world. Your heartfelt notes of encouragement really do make a difference, please keep them coming!

I'm sure you know your donations are carefully invested in AWA's work and no matter how small or large the gift, it is sincerely appreciated. Your generosity supplies us with the means we need to continue to work towards the healthy wilderness legacy we all hope for.

Thank you for being part of the AWA team! ▲



Bequests

Individuals, members, and supporters making a bequest in their will naming a gift to AWA are helping make a difference to long-term security and AWA's ability to plan for the future.

Wilderness and Wildlife Bequests

Daphne M. Smith 1980
Dr. James Birkett Cragg 1997
Anna Nowick 1999
Myrtle Muriel Koch 2001
Ian Ross 2003
Dorothy Barry 2003
William Mayer 2004
Diane Hughes 2005
Harold deVries 2009
Ann Roberts 2009
Richard Collier 2013
Harriet Ruth Mowat 2016
Kim Bennett 2016
Carol A. Haines 2017
Wendy Williams 2017
Herbert G. Kariel 2017

Memorial Tributes

AWA is honored to receive memorial tributes from family and friends; we remember those gifts and individuals here.

Brian Staszewski 1951-2017
Herb Kariel 1927-2017
Ron Wetherill 1940-2016
Lewis Ramstead 1935-2017
Ruth Moir 1921-2017
Max Winkler 1931-2017
Orval Pall 1951-1986
Sharon Tranter 1940-2013
Cyrus Spaulding 1956-2017
Eileen & Jack Van Tighem
David Manzer & Murray Manzer
Charles A. Miller 1921-2009
Helen MacLean 1927-2017
Ian Ross 1959-2003
Edwin Thomas 1920-2008
Roger Creasy 1953-2015
Nancy Hanks 1925-2017
Donald Baker 1927-2018
Ole West 1947-2018
Therese Conway 1931-2018
Vjekoslav Gorec 1938-2018
Carmell Bokvist 1972-2018
Charles Tuckey 1958-2018
Ted Davy 1926-2017
Kitty Rosengren 1930-2018
Dick Pharis 1937-2018
Ray Sloan 1941-1995
P.K. Anderson 1927-2014
Troy Hommy 1962-2018
Chris Havard 1945-2015
Del Lavalley 1924-2018
Weslyn Mather 1945-2015
Joan & Mel Dunford

Recognition For Outstanding Individuals

AWA is honoured to receive throughout the year donations from friends and families made to honour outstanding individuals and their accomplishments. This year's tributes recognize:

Ruth Bell
Spencer Waterhouse
Lara & Johanna Buchmann
Kirsten & David Pugh
Cheryl Bradley
Rick Keillor
Patricia Hommy's Birthday
Dr. Lindsay McLaren
Winnifred Lehman
Gus Yaki



Updates

Ottawa National Caribou Conference



From October 29 to November 1, I joined Cliff Wallis in representing AWA at the North American Caribou workshop in Ottawa. This major research conference is held every two years and the Ottawa location provided an extra valuable opportunity to meet federal government officials working on caribou issues.

One highlight was the ‘Indigenous knowledge’ sessions that ran throughout the conference. There were members of Indigenous communities from both barren-ground and woodland caribou lands, from Yukon to Labrador. Some recounted caribou legends, some documented changing habitat and population conditions, and some described their management innovations. Many spoke of themselves as ‘caribou people.’ Their identity and survival was intimately connected with caribou. It provided a powerful inspiration to support indigenous communities’ efforts and rights to have a continuing relationship with self-sustaining populations of caribou.

Another highlight was meeting and listening to scientists and ENGO colleagues who I had only known through e-mails before. At the Climate Change workshop, the



While in Ottawa, AWA took the opportunity to ask for strong federal government habitat actions to save caribou. AWA did this with ENGOS on Parliament Hill (AWA's Carolyn Campbell 4th from right) and meeting with MP Sean Fraser, Parliamentary Secretary to the Minister of Environment and Climate Change. Credit: Stand.Earth and AWA.

University of Montana's Mark Hebblewhite made two key points: human land use still affects caribou habitat more significantly than climate change and land management at the large landscape scale, including protected areas, is the best scale for caribou. At the conference's kickoff panel, David Suzuki Foundation's Rachel Plotkin laid bare the misleading “manufactured uncertainty” tactics used by both climate change and caribou habitat naysayers: deny the problem, deny the cause, and as a last resort, say it's all going to cost too much to fix.

On that last point, at the conference's poster session AWA was able to showcase an October 2018 economic report on optimal solutions for conserving northwest Alberta caribou habitat. The report was commissioned by AWA, David Suzuki Foundation, and the Harmony Foundation. Written by eminent natural resource economist Dr. Tom Power, the study concludes that managing lands for caribou recovery – including two new protected areas and a seismic line restoration program – can grow the economy in the Bistcho-Yates caribou ranges of northwest Alberta. It also recommends that, across all caribou rang-

es, we begin with the shared goals of caribou recovery and community economic activity and proceed to build optimized ‘least cost’ habitat solutions (see also the Bistcho article in this issue). Our poster display included vintage AWA posters which had warned decades ago that mountain caribou were headed towards extinction. We also displayed a colourful sample of the hand-drawn caribou flags created by hundreds of concerned Albertans who joined in our caribou flag campaign.

During the week we also met with Environment and Climate Change Canada (ECCC) civil servants and with three Members of Parliament. We outlined the Power report's recommendations for optimal range plan solutions for Alberta caribou and communities. We explained why we believe a measured, interim federal habitat protection order is urgent to help drive the completion of habitat-focused caribou range plans by Alberta. We also expressed our concerns with an Canada-Alberta conservation agreement: it is taking too long and it may focus too much on extreme wildlife measures such as caribou fences and extensive wolf kills to facilitate, or turn

a blind eye to, overall ongoing habitat loss.

Our meeting with New Democrat Members of Parliament Linda Duncan (Edmonton-Strathcona) and Richard Cannings (South Okanagan-West Kootenay) prompted Linda Duncan to make a strong statement on behalf of caribou in the House of Commons on November 1st. She described calls by Canadians for an immediate safety net order for northwest Alberta caribou as a needed safeguard, while strategies are

developed that will protect critical habitat and maintain a viable economy. We also met with Liberal MP Sean Fraser who is parliamentary secretary to the ECCC minister. He is optimistic in what a Canada-Alberta conservation agreement, expected to be completed within a year, will accomplish. Frankly, we need to see some substance and evidence in order to share his optimism. Overall, we valued the chance to underline to government and opposition

MPs alike what we believe to be the urgent federal responsibility to take stronger actions to help Alberta's endangered caribou survive and recover.

AWA would like to thank one of our ENGO partners, Harmony Foundation (<http://harmonyfdn.ca>) for supporting Carolyn Campbell to attend this important conference.

- Carolyn Campbell

AWA After Hours

We're excited to have launched our newest series of outreach events – *AWA After Hours*! *AWA After Hours* is a set of after-work meetups to promote community-building and conversation around wilderness protection. Each event features one of Alberta's iconic species or spaces to help spread awareness and support for regional conservation issues.

Thank you to everyone who attended After Hours' inaugural event, Caribrew! Thirty-three members joined us at Born Colorado Brewing for craft beer and a crash course in woodland caribou. Attendees designed caribou flags that AWA Conservation Specialist Carolyn Campbell packed with her to Ottawa as she gathered with other ENGOS and researchers at the 17th Annual North American Caribou Workshop (NACW).

Our next After Hours event, Pints & Peaks, will be held on December 20th at AWA's own office. This event will feature



Talking About Caribou Over Caribrew PHOTO: © G. WARK

ornament painting, a short presentation on our Wild Spaces 2020 campaign, and letter signing to support and promote AWA's ambitions for Alberta's protected areas network. In the spirit of the holidays, rum apple cider, spiked egg nog, and festive homemade

cookies will be available for purchase.

Keep an eye on our website for future events: albertawilderness.ca/events

- Grace Wark

AWA's 2018 Hiking Season

AWA's 2018 hiking season whisked us off on some great adventures that offered breathtaking views of many Alberta landscapes. Over the past year, more than 200 people took advantage of AWA's hikes program and helped to make it a wonderful season.

AWA hikes aim both to promote healthy lifestyles and increase awareness about the natural history and unique features of Alberta's wildspaces. Amazing volunteers and staff are key to realizing that second

goal. From the Cardinal Divide to Lakeland, from the Parkland Dunes to the expansive grasslands of Milk River Ridge, AWA explored a broad range of natural regions across Alberta, and made many new friends along the way. Several trips to Nose Hill Park, a natural treasure in Calgary's backyard, reminded us of how protected areas in our metropolitan areas may serve as refuges for the ecological values we seek to protect and promote.

As Albertans, we are very privileged to

live in such a beautiful and ecologically-diverse province. Sharing trips into some of that beauty and diversity over this past year has been our distinct pleasure.

Our hikes program will not be hibernating this winter. Why don't you join us on a winterscape exploration near the town of Cochrane on January 11th 2019? Vivian Pharis and Christyann Olson will join me in following a trail through a 40-acre Environmental Reserve located at the southern end of the Bighill Creek

drainage in Rocky View County. The gentle terrain of this glacial meltwater coulee is home to an array of resident wildlife species and is sure to offer some picturesque views. We hope you will register online and join us there!

- Nissa Petterson

A misty exploration of the Crowsnest Pass with dedicated volunteers Carol and Terry Ostrom.
PHOTO: © G. WARK



Grassy Mountain Coal Project Under Review

A joint provincial-federal panel has started its review of a proposed coal mine in the Crowsnest Pass. Benga Mining Limited, a subsidiary of the Australian company Riversdale Resources, has proposed to develop and operate an open-pit metallurgical coal mine approximately seven kilometres north of Blairmore in the Crowsnest Pass. The project footprint will span 2,800 hectares (28 square kilometres) and operations are expected to last 24 years with a production capacity of 4.5 million tonnes a year.

This proposed project officially surfaced in March 2015. In January 2016, the Canadian Environmental Assessment Agency determined that the Environmental Impact Statement (EIS) produced by Riversdale Resources did not satisfy all requirements of the *Canadian Environmental Assessment Act* (2012). Accordingly, it required the company to respond to a number of information requests. On January 25, 2016 the Alberta Energy Regulator (AER) informed Riversdale Resources that the Environmental Impact Assessment (EIA) was incomplete. These two rulings put a halt on the review process until deficiencies were addressed. As of November 2018, Benga has submitted its eighth (!) addendum to its

Environmental Impact Assessment in order to address these deficiencies.

With perceived deficiencies now deemed sufficiently addressed, a joint provincial-federal review panel has been established, consisting of Alex Bolton (chief hearing commissioner with the Alberta Energy Regulator), Hans Matthews (President of the Canadian Aboriginal Minerals Association) and Dean O’Gorman (hearing commissioner with the Alberta Energy Regulator).

The Joint Review Panel has now begun a public comment period that will run until January 21, 2019 on “the sufficiency and technical merit of the information” available on the Canadian Environmental Assessment Agency’s website. Indigenous groups, government agencies, and the public also are invited to make recommendations to the Joint Review Panel about any additional information the Panel should have before it holds a public hearing.

AWA has had long standing concerns with the proposed project’s potential to disrupt the local ecosystem; neighbouring creeks are federally protected critical habitat for threatened westslope cutthroat trout under the *Species at Risk Act*. If the Grassy Mountain mine is developed, these populations are at serious risk of further harm from potential sources of selenium and sediment as

well as further habitat degradation.

In addition, AWA is concerned that approving Grassy Mountain would open “Pandora’s Box” – more mines in the Pass could be proposed. Postmedia’s Amanda Stephenson pointed to Atrium Coal Ltd.’s interest in developing a 22,000-hectare coal mine adjacent to Grassy Mountain if Riversdale is successful. She quoted Atrium CEO Max Wang as saying: “There are quite a number of global investors, mostly from Australia, interested in that region...but they are very much looking to the success of Grassy Mountain.”

This may cripple any progress made to reduce cumulative effects under the recently released Livingstone-Porcupine Land Footprint Management Plan. Indeed, one questions whether these coal projects will be compatible with the Biodiversity Management Framework, now slated to be released in 2019, which will place limits on spatial human footprint (cutblocks, mines, etc.) in the region.

AWA will continue to follow the review process as it unfolds in the coming year and we hope the panel will agree that the home of threatened fish is no place for a coal mine.

- Joanna Skrajny

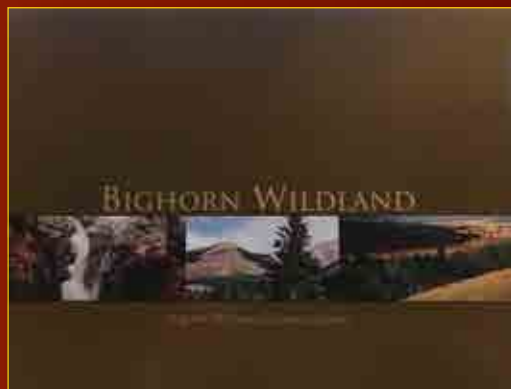
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