

A WILDLANDS ADVOCATE



THE ALBERTA WILDERNESS ASSOCIATION JOURNAL

AUGUST 2016

Wild Spaces, Wildlife, and OHVs:
What's a Minister To Do?



C O N T E N T S

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Cover Photo

Ray Blanchard's striking photo of a bison in Waterton touches several of the key issues found in this issue of the Advocate



Featured Artist: Kari Lehr

Kari graduated from the Alberta College of Art and Design in 1987. She focused her career on illustration for almost 20 years while living in Calgary and raising her three children. In 2004 she and her family moved to the Crowsnest Pass and it is in this inspiring mountain environment that she now pursues her own art. Kari's work explores themes relating to womanhood and our connection to the natural world and each other. Please visit Kari's website karilehrart.com to see more of her creations.

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Minister Phillips' Response to AWA's Requests About the Castle

I wish I had one to show you. On several occasions, and through several mediums, AWA has asked Alberta's Minister of Environment and Parks for information and clarifications concerning the Castle Parks. Her silence is deafening. This is where we hoped to publish her response to those requests.

I would invite you to make good use of this blank space. Use it to write the Minister a letter to ask respectfully that she keep her promise to "fully protect" the Castle. This means banning OHVs from these parks... now, not at some future date that another minister or government might change.

Or, if you have a young artist in the family, ask the artist to sketch a picture of what she or he thinks the Castle should look like for future generations. Send it to the Minister and please email me a copy as well. The Minister's mailing address is:

The Honourable Shannon Phillips,
Minister of Environment and Parks,
208 Legislature Building,
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Edmonton, AB T5K 2B6
OR: aep.minister@gov.ab.ca



ALBERTA ENVIRONMENT

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-Ian Urquhart, Editor

Sincerely

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Failing Grade for the Draft Grizzly Recovery Plan:

D- for Disaster

By Joanna Skrajny, *AWA Conservation Specialist*



With school back in session it won't be long before students bring their first report cards home. A vital part of our job at AWA is to issue our own report cards on how well our governments are managing your environmental legacy. The Alberta Government has received its own failing grade from AWA on the draft Grizzly Bear Recovery Plan, which it released as summer began. We hope that, like students busy at school, Alberta's public servants are busy revising their draft plan into a final version that will offer the promise to protect the grizzly that this iconic species deserves.

Here's how we reached our conclusion that the draft plan deserves a failing grade. To begin with, this Recovery Plan is long overdue. The 2008 Grizzly Bear Recovery Plan expired in 2013 – and despite expectations that it would be renewed at the end of 2013 (or early 2014) with only minor changes, the government decided to undertake a complete rewrite. Three years later, on June 1, 2016, the Government of Alberta finally released its draft Recovery Plan.

I wish when I was marking this plan I could have said “better late than never.” I can't for a number of reasons. First, remember the “slacker” in your school projects – the chap who wanted others to do all the work but was prepared to take a healthy part of the credit for the final product? That fellow seems to have written this report, as the Draft's basic premise is “if other places are doing a great job, why should we do anything?”

There's a troubling logic behind the

Plan: that the status of grizzly bears in Alberta could be down-listed from Threatened with fewer than 1,000 mature individuals in the province. This total is the international standard for a genetically viable population. Their justification for this change is due to new information demonstrating that grizzly bears in Alberta are well connected to populations in B.C. and Montana – locales where grizzlies are thriving. In other words, the Recovery Plan essentially says that Alberta doesn't have to take much responsibility for recovering grizzlies since our neighbours are doing such a good job. We can rely on our population being “rescued” by theirs. But, I'm reminded of what Sid Marty said in his Martha Kostuch lecture last year: Montana bears come to Alberta to die.

This other, more responsible view, also suggests that what we do on our side of the political fence matters a whole lot for what happens to grizzlies on the other side. Recent research by Mowat and Lamb in grizzly bear population size and mortality in southeastern BC found that that sub-population declined by 40 percent between 2006 and 2013. The paper outlines that the Highway 3 corridor has created a “sink” area of high mortality; bears move there and have a high probability of dying. Unsurprisingly, on the Alberta side of the border, there have been both an increasing number of grizzly-human conflicts and an increased number of grizzly deaths. The high mortality rates in southwestern Alberta and in B.C. may reflect unsuccessful “rescue” attempts by bears in neighbouring regions - in other words,

although bears may come to Alberta, they come to Alberta to die. All of this means that no matter how successful neighbouring regions may be at recovering grizzlies, Alberta shouldn't ignore its responsibility to maintain secure habitat for its own grizzly population, as it contributes to the greater North American population. It's time for Alberta to pick up the slack and do its part in the group project.

What should you do if a wildlife population hasn't met the goals you set for its recovery? One unfortunate option is to move the goalposts, to set a new threshold that's easier to reach. This seems to be what Alberta is doing. The number of dying grizzlies in southwestern Alberta is so high that the draft plan changed the threshold for what the Alberta government considers to be “acceptable” mortality rate objectives in the area to “less than 6.0%, of which the female mortality does not exceed 1.8 %.” This increases the number of grizzly deaths that will meet this new interpretation of acceptability. The reasoning behind this increase in acceptable grizzly deaths was that the rate was “adjusted to achieve population maintenance instead of population growth in order to not further exacerbate the very high rates of human-grizzly conflict.”

This logic is questionable on two accounts. First, this change in what constitutes acceptable mortality rates has no scientific basis and places the greater Alberta population of grizzlies at greater risk due to their large home ranges. We cannot reasonably expect to increase the number of “acceptable” grizzly deaths and expect



All types of linear disturbances are an important contributor to the number of grizzly deaths due to humans. PHOTO: © C. OLSON

them to recover at the same time. Second, human-grizzly conflict will not decrease (no matter how many bears are on the landscape) without proper attractant management and aversive conditioning, since people aren't going away anytime soon. In fact, some population projections for Alberta suggest that more and more people will move into bear country. Instead, we need to help teach Albertans what living with grizzlies means so that we can sustainably recover the population.

Regarding this second point the draft plan provides some hope. It outlines a plan to enhance Alberta's Bearsmart Program, including the hiring of additional human-wildlife conflict management specialists. This is great news because Bearsmart Programs have been proven to be incredibly effective throughout the prov-

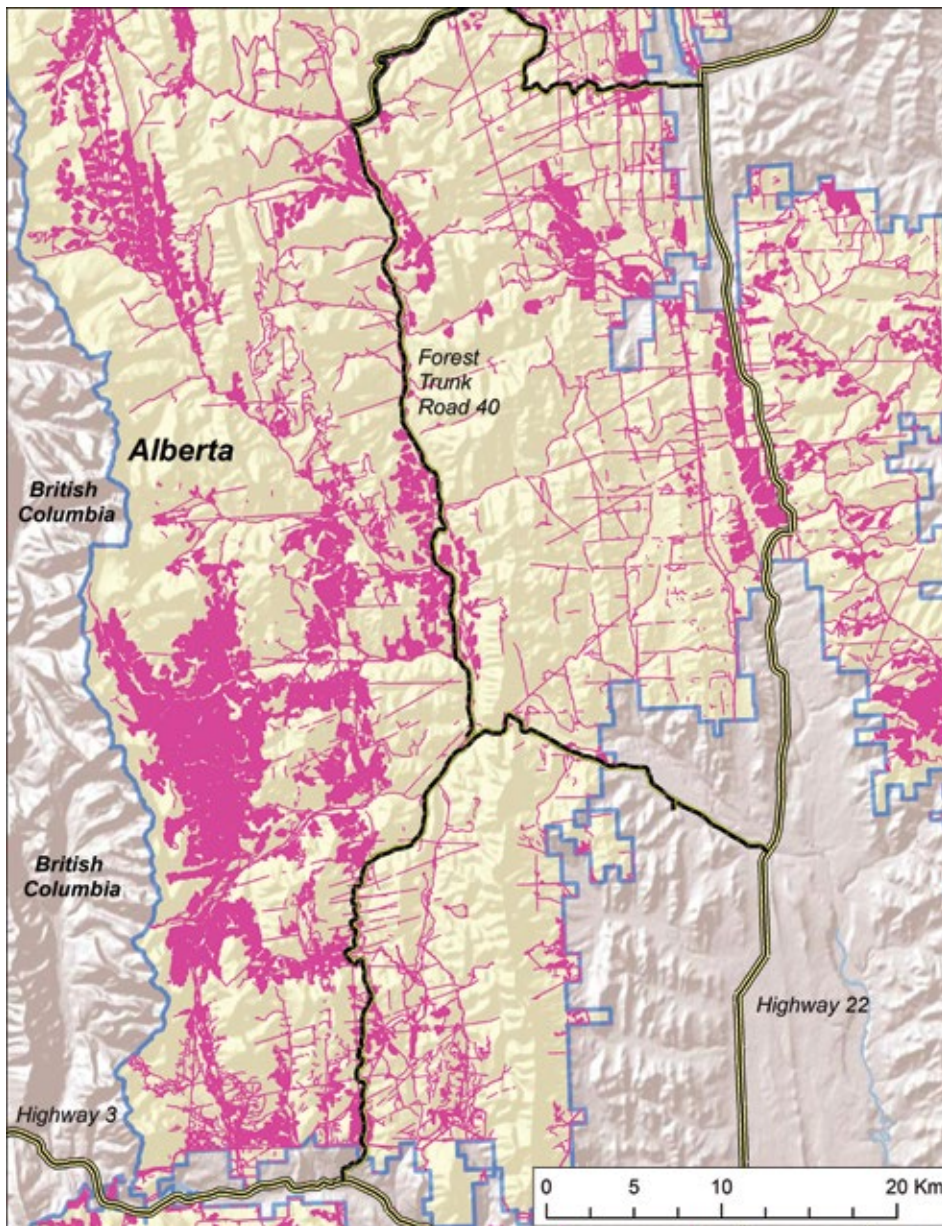
ince, but currently they are often managed with little to no funds on the backs of dedicated volunteers. It will also lighten the load of Fish and Wildlife officers, who spend the bulk of their time dealing with human-wildlife conflicts. We look forward to seeing additional funding to support Bearsmart Programs throughout the province.

Another concerning development in the draft plan is removing the Porcupine Hills from the "Recovery Zone" and designating them as a "Support Zone" in Bear Management Area 5 (BMA 5). This means that there will no longer be a requirement to manage open route density or limit mortalities in the area. This has the potential to increase grizzly deaths and increase relocation away from vital grizzly habitat in the Porcupine Hills.

From Open Route to Open Road – the Most Troubling Change

But another change in the new Grizzly Bear recovery plan is maybe the most concerning, as it will have widespread impacts on the future of Alberta's wild spaces. The new Draft Grizzly Bear Recovery plan proposes to move from Open Route to Open Road density thresholds.

The original Recovery Plan used open routes as a measure of human access into grizzly habitat. Open routes include seismic lines, cutblocks, recreation trails, transmission lines, gravel roads, or any human disturbance that people can use. Grizzly bears avoid humans, so as more people access grizzly habitat, the more grizzlies are displaced out of the best quality habitat and food they require. This puts



What's the difference between Open Roads and Open Routes? Plenty. This map outlines what these two concepts mean for how we understand the human footprint on the landscape. The black/yellow lines approximate an open road definition; pink areas pinpoint all linear disturbances. Source: P. LEE

additional stress on these animals. Human access through open routes also threatens grizzlies through direct kills such as poaching, accidental collisions with highway vehicles or trains, self-defense kills (usually by hunters), and hunter error. All of this reaffirms the statement in the 2008 Grizzly Bear Recovery Plan: "Human use of access (specifically, motorized vehicle routes) is one of the primary threats to grizzly bear persistence."

Now, the current draft plan only places limits on open roads, which they define as "access that is reasonably drivable with on-highway vehicles." This means that

instead of placing limits on all human disturbances which people can use to venture in grizzly habitat, limits now will only be placed on roads you can use with your beat up Corolla from the 1990s.

The original grizzly plan was unequivocal: "Because human use of access is difficult to measure, open route densities are recommended as a surrogate for amount of human use." This was a reasonable proxy to estimate where and how often people would interact with grizzlies. The new plan ignores a wealth of disturbances which can and most likely are accessed by humans; it turns a blind eye to the

precautionary principle. By arbitrarily and unjustifiably judging these other disturbances to be inconsequential, it also has the perverse potential to encourage further disturbances in Alberta. It turns that same blind eye to the fact Alberta already far exceeds any acceptable disturbance limits for wildlife.

Take, for example, the Livingstone and the Porcupine Hills. They are a part of BMA 5. According to the new definition "open road density is well managed in this BMA with no GBWU [Grizzly Bear Watershed Unit] exceeding expectations." Yet you take one look at the scope of disturbance within the Livingstone and there is no way that you can assess the landscape as healthy. In fact, what you see is a proliferation of human footprint and disturbance on the landscape, the negative effects of which are further exacerbated by motorized recreation on these fragile ecosystems (see map).

It is therefore frankly ridiculous to say that density thresholds should only be placed on roads as "the extent that OHVs contribute to human caused grizzly bear mortality is a knowledge gap." Even within the National Parks, a study in 2000 found that the majority of human-caused bear mortalities fell within 500m of roads and 200m of trails – and trails in National Parks only receive foot traffic! And, even if this imaginary knowledge gap existed, isn't it time we started managing what we do on the land according to the precautionary principle?

And we know that OHV use is at least equally – if not more disturbing – to wildlife than foot traffic. Fortin, Rode, Hilderbrand, Wilder, Farley, Jorgensen and Marcot found that the main impact of recreation on brown bears was that they did everything to avoid people, both by avoiding people physically and in time. All this avoidance increases the bear's energy output and affects their nutritional needs and intake. The study by Graves, Servheen and Godtel on grizzly bears supported these findings. They concluded that bears avoided "areas within 250

News Release

Recovering Grizzly Bears by Re-definition

April 30, 2009

- 900m from ATV trails and within 450
- 600m from single-track trails, which had some motorbike use. [...] Bears were less likely to spend time near trails with high (~5 trips/day average) motorized use than trails with low motorized use.” It’s therefore unreasonable to believe that we cannot include limits on all human access, especially OHV use, because *we don’t know enough about their effects!* The science is sound and has been established for decades. It’s why jurisdictions such as Montana have limits on motorized access and have seen the grizzly population increase. Even if this imaginary knowledge gap existed, we should apply the Precautionary Principle and assume that all disturbance is being used by people to enter grizzly habitat unless we know otherwise.

This draft Recovery Plan is full of shortcomings, with many elements almost resembling a mockery to basic principles of wildlife management. In fact, it so closely resembles satire that it’s uncannily similar to the satirical news release AWA put out in 2009 (see the accompanying text box).

To conclude, the proposed draft Recovery Plan fails our grizzlies, species that share critical grizzly habitat, the Alberta public, and fundamental wildlife values. The draft plan which will likely increase the risk this iconic species faces in Alberta. Please contact your MLA and the Minister of Environment and Parks and demand more for this iconic symbol of wilderness. We don’t want to assign any more failing grades. 🐻

After a seven-year recovery process, Alberta’s grizzly bears have now been successfully recovered. This is the startling finding from the *Grizzly Bear Re-definition Program*, a new study by researchers at the Alberta Institute for Anecdotal Evidence (AIAE).

“We knew that recovery of grizzlies was being hampered by motorized vehicle access,” says AIAE spokesman Dr. Charles Brain. “So we decided to re-define *motorized vehicle*. And then we decided to re-define *recovery*.”

Those re-definitions were so effective that the Institute is now working on re-defining *grizzly bears*, to ensure that the province’s grizzly bear recovery process is even more successful.

The pioneering Grizzly Bear Re-definition Program began in 2008, when the term *motorized vehicle* was re-defined to mean “vehicle with a motor, more than 92 inches wide, with more than seven wheels. And red.” Subsequently, *motorized vehicle* access into grizzly habitat was considerably reduced.

Following on from this successful re-definition, AIWC moved quickly to re-define the word *recovery*. The word now officially means “Doing exactly what we were doing before, but with the word sustainable in front.” Once again, grizzly bear recovery took an enormous step forward.

AIWC is now drafting a new definition for *grizzly bear*. “The working definition for *grizzly bear* is now ‘Hairy or non-hairy animal that may or may not have antlers’,” said Dr. Brain. “Or wheels.”

“We are proud to bring Alberta’s Grizzly Bear Recovery process to such a successful conclusion,” said Doris Klein, spokesman for Alberta Sustained Resource Development (AbSuRD). “We are now looking forward to completing successful recovery programs for all endangered wildlife in the province, including woodland caribou, black-footed ferret and woolly mammoth.”

Coming soon, the Alberta Institute for Anecdotal Evidence will be using lessons learned from its Grizzly Bear Re-definition Program to solve the thorny old problems of *climate change and death*.

Featured Artist Kari Lehr

Shining Through
10"X20"
acrylic on canvas



Myths About Off Highway Vehicle Use

By Lorne Fitch, *P. Biol.*



Myths can be widely held but represent false beliefs or ideas. They can become more powerful and compelling than reality, especially if repeated often enough, and never challenged. Many use myths to support a particular ac-

tion or activity. Listening to Off Highway Vehicle users for some time provides a recurring set of statements that fall into the category of myths. These are the prevalent ones:

Myth 1 It's only 1% (or 3%, 5%, 10%...) of OHV users that cause problems.

The reality is that it is the constant, unrelenting traffic on trails (and off trails) not designed for OHV use that is the major contributor to erosion, stream sedimentation, wildlife disruption, and loss of quiet recreation. That includes everyone who operates an OHV.



OHV crossing in westslope cutthroat trout critical habitat in the Crowsnest River drainage, August 2014.



OHV tracks through Summit Marsh in the Oldman River drainage, May 2016.

Myth 3 OHV use has no more impact than foot and horse use.

Reality: The argument OHVs exert no more pressure on the soil surface than a hiker or a horseback rider disappears under the impacts of OHV speed, spinning tires, wider trails, and traffic volume. The linear orientation of OHV traffic disrupts drainage patterns, capturing and redirecting flow with increased erosion.

Myth 2 OHV users know how to operate their machines to minimize impacts and be good stewards.

Reality: The sheer amount of damage and problem areas in the form of excessive erosion, ruts, mud holes, trail widening, avoidance of bridges, collapsed stream banks, following stream courses and multiple trail development suggests anything but stewardship. Many operate their machines in ways to magnify the damage.

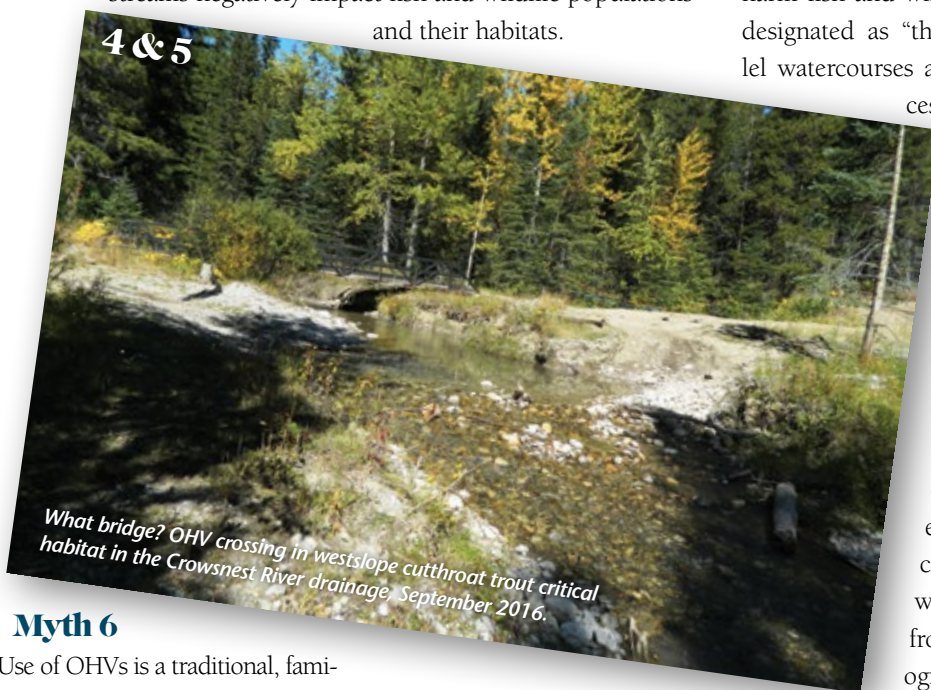


OHV crossing of westslope cutthroat critical habitat and bull trout spawning area, September 2016.

Myth 4 Fish and wildlife populations are not harmed by OHV use.

Reality: Thoroughly researched, objective, scientific studies say otherwise. Noise, traffic intensity and frequency, trail density, incursions into critical areas and increased sediment deposition in streams negatively impact fish and wildlife populations and their habitats.

4 & 5



What bridge? OHV crossing in westslope cutthroat trout critical habitat in the Crowsnest River drainage, September 2016.

Myth 6

Use of OHVs is a traditional, family-oriented pursuit that brings Albertans closer to nature.

Reality: While OHVs provide opportunity to access nature, to drive through (or over) nature there is no conclusive evidence their use connects people with nature. OHV use is a pursuit where people substitute gas engines for natural locomotion and distance themselves from the landscape with speed, technology and an obstacle-course mentality. Most seems activity focused, more so than using the machines to reach a destination, from which a direct connection is made with the landscape by walking. Activities like making new trails, racing, getting stuck, hill climbing, mud bogging, trashing wetlands and splashing through (and up) streams seem inconsistent with an appreciation for nature.

The phenomenon of OHV use is less than two decades old in Alberta, given that statistics on OHV ownership indicate relatively few people owned such machines even 15 years ago. Only six percent of Albertans engage in motorized recreational activity; 67 percent of Albertans have a preference for non-motorized outdoor recreation. Demographics suggest OHV users are more likely to be younger, male and single than a family group.

6



Children on OHVs in an OHV staging area in the Oldman River drainage, 2015.

Myth 5 The solution to the problems of OHV use includes more and better designed trails with bridges over streams.

Reality: Linear density (the measurement of trail length/landscape area) already exceeds critical thresholds for many fish and wildlife species; building more trails will significantly harm fish and wildlife populations, several of which are already designated as “threatened”. More trails will intersect or parallel watercourses and require more bridges. Bridges do not successfully deal with sediment from trails since it is the approaches to stream crossings that continue to erode under OHV use.

Myth 7 Other land uses (like logging) are more destructive than anything done by OHV users.

Reality: Resource extraction industries have created much of the access used by OHV users and the failure of government agencies to effect trail closure and restoration has exacerbated the issues. However, OHV use has never been considered and dealt with as a land use, complete with policy and regulation. In deflecting criticism from the impacts of OHV use, users fail to recognize cumulative effects and their contribution. OHV use can delay and prevent effective restoration and extends the life span of industrial impacts.

7



This high-gradient OHV trail, after collecting rainwater from a logging road, became a spillway draining into Allison Creek, upstream of westslope cutthroat trout critical habitat.

Myth 8 Educating OHV users will solve the problems.

Reality: Education can be a tool for those that recognize the issues, want to change their behavior and don't have a sense of entitlement to freely engage in destructive OHV activity. The education option assumes people want to be educated, that voluntary behavioral shifts are possible with no other inducements (like regulation and enforcement), that forums exist where OHV users can be educated and that all users can read and respond positively to signage.

Education is not a public relations exercise by OHV users to maintain the status quo; it is an endeavor to change attitudes and actions. Only a small percentage of OHV users are represented by an organization. Most users are beyond the influence of an organization and any educational initiative.

Studies indicate OHV users don't want their use restricted, want fewer regulations, do not support user fees, enforcement, and government involvement. They want to continue to pursue their recreation with less, not more impediments.

Myth 9 There is a recognition amongst OHV users of the impact of their activity.

Reality: OHV users become more conditioned to negative impacts over time, less sensitized to damage the activity creates, causing the detrimental effects of OHV activity to become less (not more) obvious and less (not more) concerning. It is a case of perceptual blindness, an inability (or unwillingness) to recognize and acknowledge the obvious.

Myth 10 OHV activity generates substantial economic benefits, especially to local communities.

Reality: While OHV dealers benefit from sales, there is no conclusive evidence local communities have enhanced and substantial economic activity because of OHV use.

Money spent on OHVs and their use is discretionary, unlike mortgage payments, grocery bills and taxes. If people don't spend such money on OHVs the money isn't lost, it is redirected somewhere else in the Alberta economy. Most of the money spent to purchase an OHV and accessories doesn't linger in Alberta; it enriches corporations far from Alberta.

The assertion of economic benefits from OHV use always fails to account for costs, including more road maintenance, fire suppression, weed control, emergency services, medical expenses from injuries and loss of economic benefits from bona fide land uses like ranching, equestrian use and ecotourism. Nor do the "benefits" factor in enforcement costs, trail restoration, impacts on downstream water users and loss of biodiversity (including declining angling and hunting opportunity).

OHV activity also precludes other recreational pursuits and the associated economic benefits due to avoidance of areas by people seeking quiet recreation because of noise, real and perceived harassment, concerns of individual safety and loss of ecological integrity.



Car wash or trout habitat? Crowsnest River drainage, 2014.



"High Marking" in the alpine, Crowsnest River drainage, July 2015.

When our "enjoyment" of the landscape blinds us to the impairment occurring it is time to ask whether the activity is legitimate. Repeating the myths of OHV use, in the hope the messages will become convincing will require an unattainable magic. Substituting myth for fact isn't viable and risks continuing the stereotyping of OHV users as uncaring, thoughtless and irresponsible. At its root, reality is consensual. When a group, like OHV users, makes up its mind what it is going to see, then sees it, it is a crowd delusion. OHV use will never, and should never, trump watershed protection, maintenance of fish and wildlife populations (especially threatened species) and quiet forms of recreation that reconnect people with nature. ▲

Lorne Fitch is a Professional Biologist, a retired Fish and Wildlife Biologist, and an Adjunct Professor with the University of Calgary.

And the Facts Say...Global Forest Watch Canada on the Castle

By Ian Urquhart



To this layperson the most two most important contributors to understanding the status and prospects of threatened and endangered species are habitat and political will. I've found it impossible to pick up a report on the status in Alberta of species such as grizzlies or westslope cutthroat trout and not find a discussion about how habitat and how we've altered the natural order has led to the decline of those species. Looking into their future I've yet to read a report that doesn't stress the importance of protecting and restoring habitat to their chances of surviving and thriving in Alberta. Boyce, Herrero, Horejsi, Nielsen, and Stenhouse all have emphasized this fundamental truth in their work.

It's more than a little disconcerting to note that some of these findings were made decades ago. This fact highlights the importance of political will, in this case its absence, to the status and future of threatened flora and fauna in places like Alberta. You can point your finger in just about any direction and see where our failure to rein in our own ambitions, be they to live in that new country sub-division or to send two-by-fours to build houses in the U.S., has degraded the habitat these species depend on. The "quantity of living" we enjoy has come at the expense of degrading those habitats. As citizens we haven't done enough to make governing political parties appreciate there's a significant political price to be paid for sacrificing secure wildlife habitat and compromising the health of watersheds.

Global Forest Watch Canada (GFWC) should be thanked for underlining again how Alberta's industries and residents have "disturbed" (the polite label governments and

industry prefer) the landscape. This message comes from three studies on the landscape impact of linear/anthropogenic disturbances. What's especially important about the latest three bulletins from GFWC is their focus on lands found in the proposed Castle parks. By the end of 2016 your provincial government plans to have a management plan in place for these parks. The Alberta Environment and Parks website still displays the same message it did a year ago when Minister Phillips promised to "fully protect" the Castle. Last September it told Albertans... as it still does today... that OHVs, hunting, cattle grazing, and oil/gas activity will be allowed in the Castle. To say it's exceptional to allow these activities in an Alberta provincial park in a gross understatement; this list of what activities will be allowed in the Castle also mocks a common sense understanding of what "fully protect" means. The government's decision to prohibit commercial forestry and mining in these proposed parks is welcome; it doesn't come close to justifying the activities the government feels should continue to be allowed there (<http://www.albertaparks.ca/media/6373227/faqs.pdf>).

The Global Forest Watch bulletins detail the state of the lands in the Castle parks. Their information should be vital to government officials and interest groups if they believe that science should guide what activities are allowed and prohibited in these provincial and provincial wildland parks. What does the scientific information of these studies say?

The Human Footprint...We Don't Tread Lightly or Rarely

The first bulletin examined the human foot-

print in these parks and the extent to which our footprint has fragmented the landscape and eliminated habitat. How heavy is that footprint? Is it getting heavier or lighter? The human footprint is relevant and studied in the scientific literature because it contributes importantly to habitat loss and fragmentation. Such loss and fragmentation is well-accepted in the conservation biology literature as a primary cause of species decline.

The GFWC exercise aimed to establish how much of the Castle landscape is still intact. Intact landscapes are valued for three different types of reasons. First, large swathes of forest allow natural ecological processes to mold ecosystems. Second, intact forested lands perform a range of ecosystem services such as water purification. The Castle supplies one third of the annual flow water in the Oldman River basin, the water that's vital to a community such as Lethbridge. Third, we value intact landscapes for heritage, spiritual, cultural, and recreational reasons.

GFWC measured the footprint with satellite imagery. It's clear from those eyes in space that fragmentation in the Castle has increased from 2000 to 2015. The most generous picture of the amount of intact lands still to be found in the Castle, what GFWC calls "Intact Forest Landscape Fragments," is provided by the Landsat satellite imagery. But it's not pretty. In 2000 just over 50 percent of the area covered by the proposed parks was judged intact; the Landsat imagery from 2015 showed these lands shrank by 10 percent from their 2000 extent.

The picture becomes uglier when Global Forest Watch compared the fragmentation trend in the proposed provincial park with

that of its wildland sister. The moderate overall decline of 10 percent masks dramatically different trends in the two park areas. Vanished, disappeared – that’s what has happened to the vast majority of the intact landscape GFWC identified in the provincial park area in 2000. Three-quarters of the intact fragments there in 2000 are gone now. The 2000 percentage, an unhealthy 16 percent, is now just four percent. Landscape life support is needed desperately there.

If there’s a sanctuary for intact landscapes in the Castle it’s found in the proposed wildland park. Two-thirds of the Castle wildlands were covered with intact landscape fragments in 2000; this area only had declined marginally, to 64 percent, in 2015.

The portrait of the Castle is even more disturbing when GFWC analyzed the human disturbance footprint with higher resolution SPOT satellite imagery. Think of the SPOT imagery as a telescope letting us see the landscape in more detail. In the Castle the closer you look the fewer intact landscapes you discover.

The higher resolution imagery found that the intact landscape in the Castle in 2012 actually was 31 percent smaller than what the Landsat imagery suggested. And the proposed provincial park? One percent – that’s all of the proposed provincial park that can boast an intact landscape according to the SPOT satellite imagery analysis.

If the Minister of Environment and Parks truly values what GFWC calls the Castle’s “important role for biodiversity and other ecosystem values” any new linear disturbances must be prevented and “considerable restoration work” needs to be done.

Linear Disturbances

AWA members know well AWA’s longstanding concern about linear disturbances on the land. The second GFWC bulletin focused on this version of the human footprint and detailed its density within the proposed parks. Certain qualifiers should be mentioned before reporting this bulletin’s message. First, linear disturbances are not limited to so-called “open roads.” Open road density refers only to roads that on-highway vehicles could

use. The GFWC definition of linear disturbance is much more akin to the open-route concept used by Alberta in its first Grizzly Bear Recovery Plan. It includes roads, trails (designated and not-designated), and seismic lines. Trails open to ATVs and dirt bikes are included in the GFWC definition; they are not considered “open roads.” Second, GFWC used imagery from 2012 and the status and continued existence of disturbances in the backcountry (such as seismic lines) should be verified. Finally, and this is particularly important for a species like the grizzly bear, data on how often these disturbances are used by OHVs and other users should be gathered.

GFWC’s work gives policy makers a richer, more detailed appreciation of the extent to which linear disturbances mark the Castle landscapes. Imagine for a moment that you’re about to drive from Calgary to Vancouver via the Trans-Canada highway. GFWC discovered that there are as many kilometres of linear disturbance in the Castle as you’ll travel on your drive to the coast...and back again. Nearly 2,000 kilometres (1,822) of linear disturbances “graced” the Castle in 2012. Just over 300 kilometres of those disturbances – the driving distance from Edmonton to Calgary – likely were being used as roads.

As the length of these disturbances suggests, the density of linear disturbances is very high: 3.5 km per square km in the proposed provincial park and 1.0 km per square km in the proposed wildland. These densities, according to the report’s authors Wynet Smith and Ryan Cheng, “are much higher than previously acceptable thresholds of 0.6km/km² to minimize impacts to ecosystems and species and is evidentiary of the restoration required in parts of the Castle.”

So What?

The data in these first two bulletins seem sobering. But...maybe these footprints and disturbances are benign. Such wishful thinking is demolished in GFWC’s third bulletin. That installment focuses on the implications of the fragmented landscape that is today’s Castle for grizzlies and trout. It makes a powerful case for protecting and restoring the landscapes about to be enclosed with park

boundaries. Why? Because the current state of and allowed activities on these lands and habitats is a mortal threat to threatened species such as grizzly bears, westslope cutthroat trout, and bull trout. Unless restoration begins immediately, and is commensurate with the damage that’s already been inflicted in the Castle, that threat is likely to become a reality.

The density of linear disturbance is the killer; it facilitates the decline of species and the pre-mature deaths of their members. Scientists and policy makers have known this for years. Alberta’s first grizzly bear recovery plan was categorical about this: **“human use of access (specifically, motorized vehicle routes) is one of the primary threats to grizzly bear persistence.”** (emphasis in original)

The 0.6 km/km² density threshold density mentioned in the previous section is regarded generally as an important threshold for establishing viable grizzly bear populations. Some studies define this threshold in terms of road density. Following this definition GFWC discovered that, if roads and designated motorized trails only were considered, then 30 percent of the proposed provincial park and 74 percent of the wildland meets the 0.6 km/km² threshold.

But the sky darkens if all linear disturbances are considered. Less than three percent (only eight km²) of the provincial park satisfies the threshold; at 48 percent much more of the wildland park still is at or less than the 0.6 km/km² threshold.

Since grizzlies need to eat as well as to be secure GFWC refined their analysis by adding buffers around the authors’ preferred interpretation of linear disturbances and identifying where the best quality bear vegetation was found. They concluded that high quality, secure grizzly habitat essentially doesn’t exist in the provincial park; it’s only found in the proposed wildland (see the map Grizzly Bear Core Secure Areas with Productive Habitat).

This bulletin’s message about grizzly bears to Minister Phillips is stark: if the Minister believes the Castle should contribute to grizzly bear recovery in Alberta the wildland must be protected from “further development of linear disturbances” and linear den-

sity in the provincial park must be reduced. These measures need to happen now... not next year, not five years from now. The extent of the fragmentation and degradation of bear habitat in the Castle demands immediate action.

The facts sketch a situation that is at least as dire for westslope cutthroat trout populations within the boundaries of the proposed parks. Unlike the case of grizzlies, for cutthroat (bull trout too) the simple presence of linear disturbances is a threat even if people aren't using them for recreation activities. This is because those disturbances "can still change water temperature and contribute to increase stream sedimentation." (sic) The accompanying map superimposes cutthroat trout critical habitat on linear disturbances in the Castle. It shows unequivocally that cutthroat trout critical habitat and linear disturbances go hand in hand. This same, Siamese-twin-like relationship, exists in the Castle between bull trout critical habitat and linear disturbances.

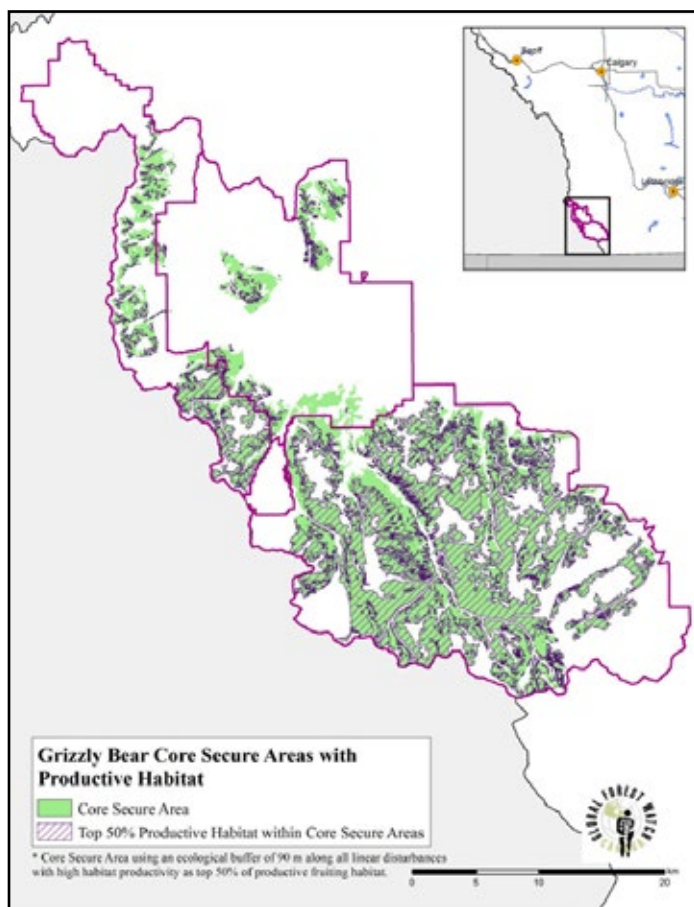
For Smith, Cheng, and Elmeligi, "(m)ost of the critical habitat for both cutthroat and bull trout is at risk from high to extremely high linear disturbance." They are gravely concerned over this situation; the need to restore trout habitat in the provincial park is urgent. The linear disturbance density in the Castle must be reduced dramatically in order to restore the critical habitat these aquatic species need desperately.

Conclusion

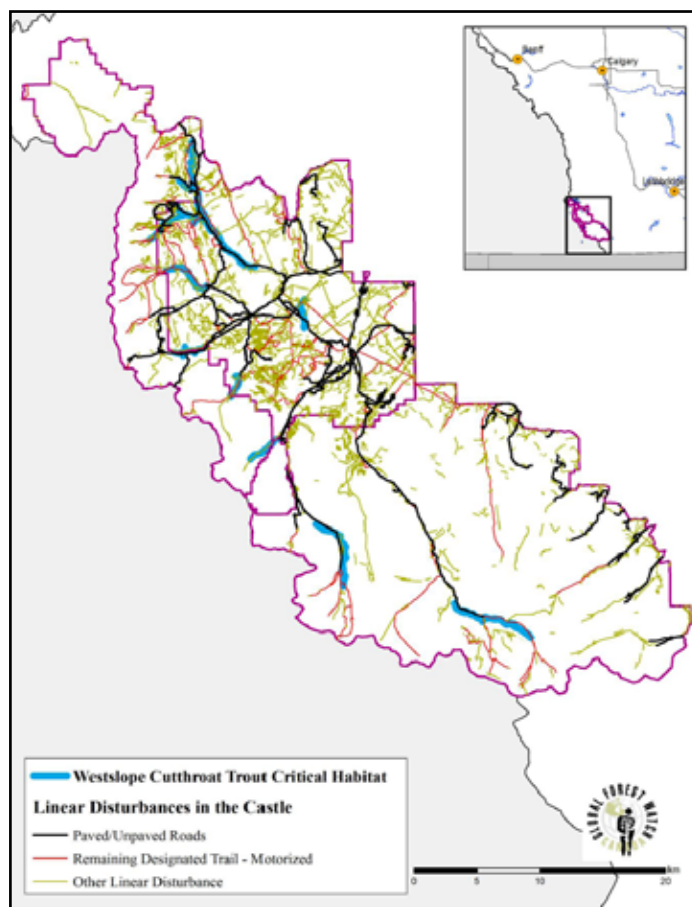
Global Forest Watch Canada's study of the health and intactness of the Castle landscapes comes at a critical juncture in the history of this special place. The GFWC bulletins use sophisticated satellite imagery analysis to test whether well-accepted understandings from the conservation biology literature about the habitat needs of species are being satisfied in the Castle. They're not. Biodiversity and the species who carry that banner – grizzly bears, westslope cutthroat trout, and bull

trout – are crippled by the habitat fragmentation that has continued apace for decades in the Castle.

The GFWC bulletins supply the scientific information needed to make the ecologically-compelling case for an immediate ban on OHVs from the proposed provincial parks. It's noteworthy that, when it came to the province's climate leadership initiative, the Minister of Environment and Parks found this type of information to be decisive. In the legislature she called members of the opposition who denied the science of climate change "ideologues." Is that the label she will have to accept if she denies the validity of the scientific information on the Castle that Global Forest Watch Canada has provided? It's never too late to do the right thing. It's time then for this government to use the GFWC data as the basis for prohibiting OHVs from the Castle parks and restoring the area's habitat. ▲



Grizzly Bear Core Secure Areas with Productive Habitat. Credit: Smith, W., R. Cheng, and S. Elmeligi. 2016. Bulletin 3. Linear Disturbance in the Castle: Implications for Grizzly Bear and Trout. A Special Series on the Castle proposed protected areas. Ottawa: Global Forest Watch Canada.



Westslope Cutthroat Trout Critical Habitat and Linear Disturbances in the Castle. Credit: Smith, W., R. Cheng, and S. Elmeligi. 2016. Bulletin 3. Linear Disturbance in the Castle: Implications for Grizzly Bear and Trout. A Special Series on the Castle proposed protected areas. Ottawa: Global Forest Watch Canada.

Hunting a Threatened Species:

Why the Hay-Zama Hunt is Good for Bison and People

By Andrea Johancsik, AWA Conservation Specialist



Do you want to hunt bison in the Hay-Zama? There is over a 99 percent chance you're out of luck. Last year, a whopping 12,587 hunters applied for a licence but only 100 licenses were issued. People vie for a rare opportunity to hunt a wild wood bison herd in the Hay-Zama, as most of the wood bison in Alberta are protected within Wood Buffalo National Park. The Hay-Zama herd is important to conservation because it is disease-free. To the east of highway 35, wild bison are assumed to be diseased; we know that over half of the population in Wood Buffalo National Park population are diseased.

New to conservation issues in Alberta, I was surprised to hear that hunting the Hay-Zama wood bison herd was allowed and regulated by the province. Wood bison still are listed as a threatened species under the federal *Species at Risk Act* (SARA). I thought it ironic that Alberta would allow hunting on a free-roaming, disease-free, wild population of a species undergoing recovery. In May 2016, the draft Recovery Strategy for Wood Bison under SARA was released.

But wood bison conservation presents a more complicated situation for management. The main reason for the Hay-Zama hunt is to prevent the spread of disease from bison in Wood Buffalo National Park. Understanding this requires traveling back in time, to the great slaughter of the American bison in North America.

A Familiar Tale of Resource Exploitation

When Europeans arrived in the New World, an estimated 30-40 million plains

bison roamed the prairies and a smaller but still substantial population of 168,000 wood bison occupied the boreal from central Alberta through the Northwest Territories and Alaska. The wholesale slaughter of bison herds began in the 1830s as the market for bison hides and meat boomed. The US Fish and Wildlife Service writes that in a matter of decades "an average of 5,000 bison were killed each day, every day of the year, as ten thousand hunters poured onto the plains." When the wild herds were decimated to the point where only a handful of individuals were left the market for bison bones was exploited next. The amount and tonnage of bones collected is mind-boggling; Le Roy Barnett wrote that "the volume brought in to Saskatoon exceeded the capacity of the railroad to haul them away."

At the same time as unbridled exploitation of the bison resource occurred across America, the wealthy saw an opportunity in the value of living bison and secured private herds. National Parks played a large role in re-establishing populations as well. Elk Island National Park, for example, received 410 plains bison in 1907 from Montana in order to preserve the species. By the time Wood Buffalo National Park was established in 1922, over 6,000 plains bison had been introduced in the region. This was a conservation blunder though as the plains bison interbred with pure wood bison. This reduced genetic purity and spread two diseases that presumably originated from cattle: bovine tuberculosis (*Mycobacterium bovis*) and brucellosis (*Brucella spp.*). Genetic purity has improved since but disease still plagues the populations

and conservation efforts to this day.

Even with these challenges, the tale of wood bison is less gloomy than that of the plains bison, which were more plentiful and perhaps more available, and therefore more extensively slaughtered – wild plains bison remain extirpated in the wild in Alberta.

How do we manage disease?

Both bovine tuberculosis and brucellosis have no cure. A vaccine exists for brucellosis but vaccinating free-ranging wild bison is not feasible. Imagine trying to vaccinate thousands of animals weighing 350-1000kg – annually! Bovine tuberculosis is even harder to control as there are no vaccines. A 2004 fact-sheet from Alberta Fish and Wildlife states the problem frankly: "It makes no sense to put time, dollars, and endangered wood bison into a program that simply provides additional habitat for bovine TB." Both diseases are health risks to humans, though risk can be lowered by proper handling and cooking meat thoroughly (smoking, drying, or freezing will not kill the bacteria).

Eliminating the Wood Buffalo National Park diseased herd and repopulating the area with non-diseased individuals is distasteful, to say the least, for many stakeholders. When an Environmental Assessment exploring that option was done in the late 1980s, AWA opposed a cull, calling it "ecologically disastrous" and questioning its cost, feasibility, and effectiveness. Furthermore, that's not to mention the scale of such a slaughter would be chillingly reminiscent of what happened in the late 1800s. In 1990 the federal Environmental Assessment Re-



Wood bison, Northwest Territories PHOTO: © C. OLSON

view Office recommended this mass cull option; the government never proceeded down this path.

However, there may be another option. Novel genetic salvage technologies are being developed to wash disease from eggs or sperm and therefore create a disease-free, viable embryo. These embryos would then be implanted into surrogate cows in a similar process to human in vitro fertilization. Salvage technologies are another example of human ingenuity trying to return the natural order to the way it was before another form of human ‘ingenuity’ – advances in rifle technology – contributed to our ability to wipe out millions of bison in a century. In other words, these technologies could constitute a conservation method to fix past mistakes. Humility, not hubris, is what should guide us as we consider these technologies. When we consider a new technology to solve a problem we created we need to consider a vital “what if” question. What if there are consequences from implementing this new technology that we didn’t anticipate?

Plus, the problem we already see – cost – is a huge barrier. The draft Recovery Strategy for Wood Bison doesn’t discuss salvage technology extensively; it only mentions that it needs to be assessed.

The short- and long-term goals in the draft Recovery Strategy do not go as far as to say disease should be eliminated. They only aspire to maintain disease-free status in uninfected herds and to ensure the existence of disease-free populations in their original range. More arguably needs to be done to answer how disease will be eliminated short of a massive bison cull; salvage technology should be explored on a pilot-scale. In the meantime, can hunting bison help maintain the current balance between diseased and disease-free herds?

Hunting the Hay-Zama Bison Herd

Hunting, as contradictory as it might sound, may improve recovery of the wood bison. A well-managed hunt can work to achieve both social and environmental

goals. If the healthy Hay-Zama bison population was left to grow and it expanded eastward, there is a real risk the diseased animals from the greater WBNP population would come in contact with the herd.

Hay-Zama’s bison are particularly unique, as they reside within a Wildland Provincial Park that is a model of successful collaboration between the petroleum industry, First Nations, and environmental groups. The Wildland Park also partnered with China’s Dalai Lake National Reserve under the Ramsar Convention. The Convention is a valuable resource to protect wetlands; it’s a lever that may be used if any further resource extraction threatens the ecological integrity of the Hay-Zama wetlands. Hay-Zama, indeed, is one of AWA’s most heady achievements. Reintroducing bison adds to the conservation success in this unique area. In fact, the reintroduction was so successful that the population went from zero to 700 in the last 30 years.

Of course, “success” is subjective and de-



Wetlands in the Hay-Zama region PHOTO: © C. OLSON

depends on who you ask.

Pat Cabezas, co-chair of the Hay-Zama Committee, emphasizes that bison were never welcomed to Hay-Zama by local people during the bison's introduction in the 1990s. "They don't eat them, they don't shoot them, they don't want them here," he says, referring to the Dene Tha' First Nation's attitude toward bison re-introduction. "For them it's an alien animal." Indeed, the Dene Tha' traditionally ate and still do eat other wild game, like moose, as an important part of their diet, and bison can disturb important moose habitat. Cabezas describes how even a government initiative to give away permits for the Dene Tha' to kill bison after the bison's population exploded didn't work, because community members didn't have much taste for bison culturally or biologically. "But, the First Nations from the Northwest Territories are more familiar with bison and they come to the area when the government releases permits to do so," Cabezas explains.

The hunt therefore may be important to securing First Nation support for bison recovery by alleviating some of the problems that bison cause in the Dene Tha' community. James Ahnassay, former Chief of the Dene Tha' First Nation, says some residents of Chateh would rather not have the bison around as they pose a risk by wandering freely through the community and could become agitated and dangerous. In addition, they can disturb areas around Hay-Zama Lakes, making it difficult for people to walk through the soft land. Cabezas also noted problems, saying "one of the most frequent calls to Fish & Wildlife from the Dene Tha' is to get rid of the bison wandering near their house." After the hunt was introduced, however, Cabezas thinks the number of calls has decreased. The government has a population target for the herd of between 400 and 600 individuals and adjusts the number of hunting licenses each year depending on the population size. That has seemed to work to control bison migration eastward

where disease is a risk, as well as increasing acceptance among local people.

Is Hay-Zama a model for solutions?

According to Cabezas, communication and education is the key to solving the disease issues and increasing acceptance of bison in local communities saying bringing political pressure from locals is far more effective than scattered pressure from environmental groups and people outside of the community. Cabezas noted the success of caribou education programs in Dene Tha' schools as an example. He believes that after education was introduced to Dene Tha' schools about threatened caribou, there have been few, if any, caribou kills from the community, despite a general enjoyment of caribou meat.

According to the draft recovery strategy, "increased access to hunting has been shown to increase public acceptance, as the perceived value of these animal on the landscape is increased. Thus, while unregulat-

ed hunting is a significant threat, as is the control of Wood Bison movement across the landscape, permitting hunting of populations where it can be done sustainably may help to improve public acceptance and have a positive impact on Wood Bison recovery overall.” Public acceptance of any reintroduced species is important and would help to support the argument that, in light of the urgency of the disease issue, a hunt is a useful conservation measure. A carefully managed hunt in the Hay-Zama is a positive step toward increasing public acceptance of bison’s presence on the landscape and reducing the risk of spreading disease.

As for other herds in Alberta, there are few non-diseased wood bison populations left. Two populations close to WBNP are believed to be diseased, the Slave River Lowlands and Wentzel Lake populations, but two are not. In the April 2015 *Advocate* Sean Nichols criticized the Alberta government for not classifying the non-diseased Ronald Lake Bison herd as wildlife. We’re relieved and pleased that in the past year the herd received new status as a Subject Animal in the Wildlife Regulations. This means it receives the same protection as a non-game animal. The Wabasca herd, a small herd consisting of a few dozen individuals south of Wood Buffalo National Park, is also known to be disease-free but has not been granted the same protection. The government intends to complete a status assessment of bison in Alberta by the end of the year. We hope that sufficient disease testing has been done of the Wabasca population to determine whether it is genetically different from the Wood Buffalo National Park population. Clearly this knowledge would help to inform appropriate policy priorities for recovery.

But before we can prioritize populations, the recovery plan needs to address more strongly the disease issue and more solutions need to be implemented. In the short term, disease reporting could be made mandatory, not voluntary, for all hunted bison including the Hay-Zama. A Canada-wide strategy on bovine tuberculosis

and brucellosis could be developed that focuses on both wild animals and livestock, and researches how the diseases are transmitted between animals. Disease-free populations could be supplemented with additional animals from Elk Island National Park.

The diseases won’t be eliminated overnight, but collaborative processes like the Hay-Zama Wildland Park have produced meaningful solutions, so there is hope for the disease issue, too. Until then, the diseases are a reminder of the tragic ruin of one of North America’s most iconic species and the complexities of human interference with wildlife. 🐾

**After designated as Endangered since 1978 and Threatened in 1988, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) recommended in 2013 to Environment and Climate Change Canada that the Species at Risk Act status of the wood bison be changed to Special Concern. However, COSEWIC didn’t consider that, under Alberta’s wildlife laws, diseased species are not considered wildlife and are not protected. Wood bison within Wood Buffalo National Park number in the thousands, but non-diseased, free-roaming herds are vulnerable to experiencing significant mortality events, like starvation or anthrax outbreaks. AWA does not support the downgrading of the Threatened status of wood bison at this time.*

Abbreviated History of Bison Hunting in the Hay-Zama

1888 – 1900: It is estimated that by 1888, only 8 plains bison remained in Canada. At the turn of the century, only 500 pure wood bison remained

1981 – A program was initiated with Dene Tha’ First Nation to re-establish wood bison in northwestern Alberta

1984 – 29 wood bison from Elk Island National Park established as captive herd

1993 – In Hay-Zama, the captive herd became free-ranging at a population size of 49

2002 – Hay-Zama population at 234. Alberta gov’t establishes a 36,000km² bison management area to protect against disease

2008 – Hunting season in the Hay-Zama is introduced as population grew to more than 700 individuals

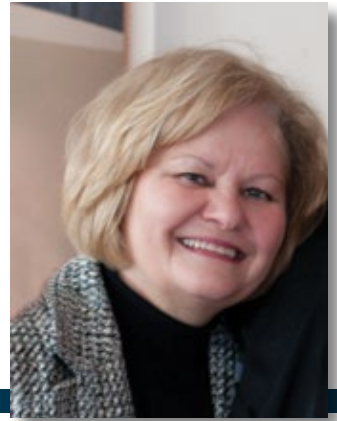
2016 – The 2016-17 hunt allows 250 Aboriginal licenses and 125 non-Aboriginal licenses for hunting between December and February. The population size was counted at 625 individuals in February 2016.

Featured Artist Kari Lehr



Harvest Dreams
24"X24"
acrylic on canvas

Sage-grouse in Alberta – are they turning the corner on extirpation?



By Christyann Olson, *AWA Executive Director*

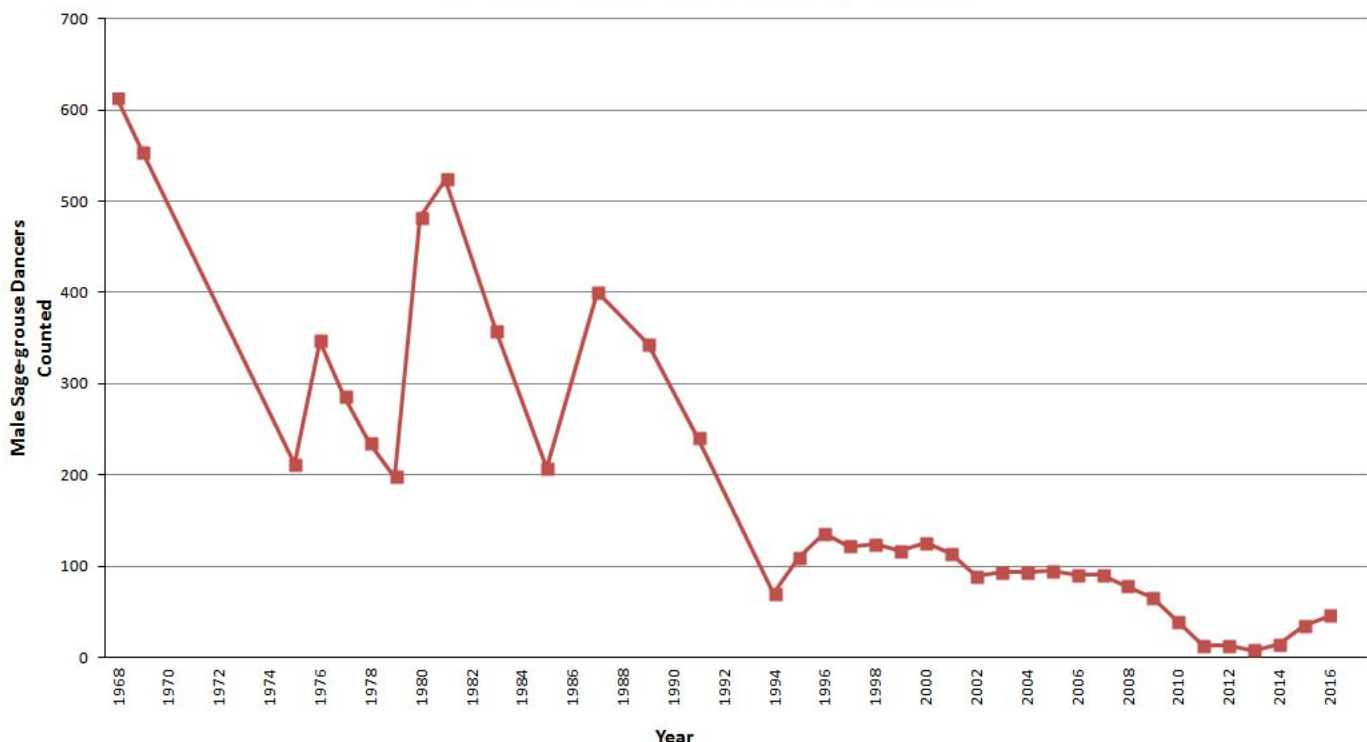
We hope so! As our readers know greater sage-grouse are in desperate trouble in Alberta. With just 14 males recorded on leks in 2012, they continued what seemed like an inevitable slide towards extirpation in Alberta. Though the cause was clear – industrialization of their habitat – provincial and federal governments refused to take action to protect habitat. That only changed after several years of legal challenges by AWA and our environmental colleagues. Then, in December 2013, the federal government issued an Emergency Protection Order (EPO). The accompanying graph shows how desperate the situation is for this iconic prairie bird.

The goal of the Emergency Order is to “achieve the best protection for the greater sage-grouse, while minimizing impacts on landowners and agricultural producers.” The order’s prohibitions only apply to habitat on federal and provincial Crown lands in southeastern Alberta and southwestern Saskatchewan. Private land is not impacted by the order.

The total Canadian population of sage-grouse has increased and is estimated to be 340 birds this year. This includes 38 females imported from Montana earlier this spring. This is less than half of the 777 birds estimated to have made up the total population in 1996. But in 2014 the total population was estimated at only

100 birds. Alberta’s 2016 spring count observed 46 males on 3 leks (display grounds) but one formerly active Alberta lek didn’t attract any males. It appears we may be helping greater sage-grouse take a step back from the brink. In 2013 only eight males were counted in Alberta while in 2014 14 males were observed and in 2015 35 male sage-grouse were counted on leks. The Saskatchewan count this year only recorded two active leks. Both leks were located in the protected lands of Grasslands National Park. Thirty-three males were counted, nearly twice as many as the 18 males recorded in 2012. AWA hopes that we have halted the trajectory of decline and that the successful recovery

Decline of Alberta's Greater Sage-grouse



of greater sage-grouse has begun. The on-the-ground actions from the Emergency Protection Order that we think have started this recovery include removing predator perches, leveling abandoned buildings, flagging fences, instituting seasonal noise and traffic reductions, and increasing significantly the education and awareness of the sage-grouse predicament and what may be done to correct it.

Why AWA Cares

- The sage-grouse is an iconic species, entirely dependent on its sagebrush grassland habitat. Where habitat is protected, sage-grouse may recover, but if this critical habitat continues to be lost to agriculture and industrial activities, then the species' decline should be expected to continue.
- Protection of sage-grouse habitat also will benefit a host of other endangered species which share that habitat. These species include burrowing owl, sage thrasher, mountain plover and Sprague's pipit.
- In a poll published in the *Medicine Hat News* on December 2, 2011, 89.8 percent of all respondents said they were

extremely concerned that sage-grouse may soon disappear from Alberta.

- The greater sage grouse was designated an At Risk species in Alberta in 1996. The provincial status was changed to Endangered in 2000. Saskatchewan identified it as a Threatened species in 1987 and changed that status to Endangered in 1999. Federally, it was listed as an Endangered species in 1998. Listing, without actions to help the species recover, didn't prevent the sage-grouse decline from continuing unchecked in both Alberta and Saskatchewan until now. Acting now to protect such a charismatic species may bode well for future efforts to maintain and/or restore biodiversity in Canada.

The greater sage-grouse story is one where we are reminded that our good intentions may have undesirable, unintended consequences. Perches have been placed throughout the prairies to help the return of birds like ferruginous hawks. I always



The ferruginous hawk is one predator that takes advantage of human-created perches to hunt greater sage-grouse. PHOTO: © C. OLSON



*Male greater sage-grouse
PHOTO: © C. OLSON*

thought that was an unambiguously good thing... until I learned that those perches become perfect predator hunting platforms. Prey like sage-grouse, their eggs, and their nests have no defence. The more we try to help species, the more important it becomes to ensure we don't create unintended consequences. 🐾

Historic Woodland Caribou Draft Range Plan Released

By Carolyn Campbell, AWA Conservation Specialist



In June 2016, the Alberta government released a draft of its first federally-required woodland caribou range plan for public comment. The draft range plan covers west central Little Smoky and A La Peche (LS-ALP) caribou populations. At the same time, it announced a historic decision to protect extensive areas of four other endangered woodland caribou ranges in its far north. In choosing our news release banner of “Boreal Blockbuster, Foothills Fiasco”, AWA applauded the significant caribou conservation achievement

in the north. However, we couldn't support the LS-ALP range plan as drafted because it will continue to destroy critical caribou habitat in the near term, by allowing in-range logging to resume and by omitting hard limits on new surface disturbance by the energy industry. In the public comment period that ended August 5, AWA urged Albertans to ask for better solutions that are available for Little Smoky and A La Peche caribou.

Industrial disturbance in caribou ranges stimulates deer, moose, and predator pop-

ulations while increasing predator hunting efficiency. As a result, caribou lose their ability to minimize overlap with predators. The best available science suggests that woodland caribou habitat is considered 'disturbed' if it is within 500 metres of industrial features such as cutblocks, seismic lines or roads. Woodland caribou require a minimum of 65 percent undisturbed habitat in their range to have a better-than-even chance of being self-sustaining.

AWA has called for better protection of Little Smoky region caribou habitat since the early 1980s, yet successive provincial governments over-allocated logging quotas and auctioned off extensive areas of surface-access energy leases. By 2011 the Little Smoky range was reported as 95 percent disturbed, yet logging and new energy-related surface disturbance continued. That same year, AWA played an important role in obtaining a court directive for the federal government to release its long-overdue boreal woodland caribou recovery strategy under the *Species at Risk Act*. This recovery strategy, finalized in 2012, has real potential to support caribou recovery by focusing on the need to achieve and maintain a minimum of 65 percent undisturbed habitat within each range.

The Alberta government chose the Little Smoky – A La Peche as the first caribou populations for developing its range plans under the federal recovery strategy. In 2013-14, AWA was an ENGO delegate to the province's LS-ALP multi-sector advisory group. We sought to examine scenarios collaboratively, in order to optimize ecological and socio-economic choices for a range



Woodland caribou are magnificently adapted to their boreal and mountain-foothills ranges, but require intact older forest and wetlands to minimize the impact of predators.

Photo: © G. GRUENEWALD.

plan, but this did not occur. In early 2015, ENGOs and indigenous communities were excluded while the government developed a Ministerial Task Force range plan report that contained only forestry and energy industries' input.

The range planning process improved greatly in December 2015. All in-range logging was deferred. A mediator was appointed by the Alberta Environment and Parks minister, and ENGOs and indigenous communities were included again in consultations and information sharing. Even though it still falls short on some crucial elements needed for self-sustaining caribou, the draft LS-ALP range plan released in June is a very significant improvement over the biased Ministerial Task Force process. For example, an extensive seismic line reclamation program has been agreed to; new logging is more strictly confined on the landscape for 5 years; and Alberta Energy will reduce the need for leaseholders to disturb the land in order to prove tenure.

In late September AWA was encouraged further by Alberta Energy's announcement that it was placing an interim restriction on the sale of mineral rights within caribou ranges in Alberta. We are still concerned, however, about what the department's

statement about "stringent operating practices" will mean on the ground and how it will contribute to the reaching the 65 percent threshold.

Nonetheless, the draft plan doesn't go far enough. Proposed new logging will continue to destroy critical caribou habitat. Logging can restart almost immediately, even ahead of a final cabinet-approved range plan. AWA also opposes the proposed 100 square kilometre 'caribou zoo' to fence in wild caribou as another way to facilitate even more near-term critical habitat destruction. Under the draft plan, yearlings will be released from the fenced enclosure into even more degraded habitat with worse survival prospects for their offspring, suggesting no end in sight to the extensive wolf cull program either.

Instead, we urge Alberta to maintain existing caribou critical habitat while minimizing impacts to local communities. Forestry companies with tenures or quotas within LS-ALP caribou ranges include: Alberta Newsprint Company (owned by Stern Partners and West Fraser), Foothills Forest Products (owned by C & C Wood Products), West Fraser, Millar Western, and Canfor. Logging by these companies must end within LS-ALP ranges and should also end in 20 km buffer zone areas around these small ranges. To minimize job impacts, forestry companies in the region

should be required to share their considerable adjacent timber allocations. A major regional logging deceleration is inevitable after unsustainable (and, in AWA's view, ineffective) ongoing mountain pine beetle surge cuts are exhausted; logging must end in-range while caribou still remain.

Energy fracking activity in this region continues to be high due to liquids-rich gas deposits; these deposits are extracted and processed into products such as condensate for transporting oil sands bitumen. Given significant advances in directional drilling, and existing fiscal tools for pooling and joint development of leases, significant energy resources can be extracted in the near term with essentially no new footprint. For the energy industry, the LS-ALP range plan should be strengthened with specific declining limits on disturbed habitat, so as to optimize existing infrastructure use, innovation, and reclamation efforts.

Alberta is required by the federal recovery strategy to produce SARA-compliant range plans for all its caribou populations by October 2017. AWA will continue to urge better solutions for precedent-setting Little Smoky – A La Pêche foothills caribou and for Alberta's other endangered caribou populations. ▲



The draft Little Smoky – A La Pêche caribou range plan proposes to restart in-range logging so more caribou critical habitat will be destroyed. This May 2016 photo illustrates the greatly expanding surface impacts of industry in the region: these mature trees were cleared and piled 15 feet high in an Alberta Newsprint Company site just northeast of the Little Smoky caribou range. Photo: © C. CAMPBELL.

Weaselhead Monitoring Project: An initiative by Environmental Technology – EVT – students at Southern Alberta Institute of Technology

By Andrew Wilkinson



Calgary is an expansive city that ebbs and flows through river valleys, grasslands, wetlands, and hillsides. As the City redefines its boundaries, fragments of wilderness are left in the wake to try to survive in a fast paced urban world. The Weaselhead Natural area (Weaselhead) is the latest natural area that will be asked to adapt to Calgary's growing population and new transportation infrastructure. It is hard to know at the present moment how mammals will use the area after the completion of the Southwest Calgary Ring Road but a project from Environmental Technology (EVT) students at SAIT Polytechnic will study this issue over the next several years.

Research has identified that roads affect mammal movement, occurrence, and habitat use (Trombulak & Frissell 2000). The Weaselhead is a natural area in the City of Calgary and a variety of mammal species inhabit the area and move through the area. The Southwest Calgary Ring Road (SWCRR) is a multi-quadrant connecting highway planned to replace an existing road in the area with a five metre earthen berm, which will span the valley on the western boundary of the Weaselhead. Traveling mammals rely on wildlife corridors to move from one usable site to another and the highway will present a significant obstacle to mammals; it will fragment the Weaselhead from outlying wildlife communities. Several students, myself included, as well as a program instructor at SAIT Polytechnic, have developed a multi-year project to

study the effects of the SWCRR on mammals using the Weaselhead Natural area as our case study.

The initial step of our project is to collect baseline data that will establish a current view of which mammals use the habitat as well as their occurrence. The results of the baseline data can then be compared to data collected in subsequent years by future students to observe any significant difference in mammal occurrence.

The First Day

Our first day on site started off on a sunny but cold mid-January day, a balance testing pathway of ice led us to the position of our first transect. The forest floor was holding on to 30 cm of snow, which for the inexperienced hiker, wound up occupying the free spaces in their boots. Twenty-five students ducked through a thick forest and scrambled over decaying trees to set up five transects measuring between three and 4 kilometres in total length. One transect consist of five to seven 100m long by seven-metre wide marked sections that run east to west in the natural area. Using transects, trained students in mammal track recognition can survey tracks and trails of mammals left behind within 3-5 days of a recent snow-fall. The task would prove to be a test of patience with Calgary weather. On the first day a multitude of tracks were identified in the snow: cougar, weasel, vole, mouse and ungulate. The optimism of the project participants was remarkable, but in the weeks that followed Calgary experienced an understated dry winter.

Several weeks had passed and the existing snow in the park consolidated into ice. New mammal trails could not be observed and any hope of fresh snow was quelled by flawlessly blue sunny skies. The lack of snow created a problem for the project, but the project had another means of data collection that was not wholly dependent upon the weather. With permission from the City of Calgary, we installed 21 motion-sensor cameras in the Weaselhead. The main objective became, in lieu of much needed snow, to collect passive data from the cameras to measure the mammal occurrence within the park. The cameras worked wonderfully, capturing the attached images of a young white tailed deer, a skulking coyote, and a prowling cougar. All of those animals are currently present and roaming in the Weaselhead Natural area.

The Future of the Project

In subsequent years, students entering the EVT program will pick up the reins of the Weaselhead Monitoring Project. They will construct transects, place wildlife cameras and catalogue data and present progress reports to our sponsor, Weaselhead Preservation Society, and to representatives of the SAIT Innovative Student Projects Fund who have supported the project financially. A final report consisting of the compiled results will be sent to the City of Calgary's parks ecologist at his request. All records also will be available to graduating students who have a vested interest in the ongoing findings of the project. The project also intends to make

its findings available to the public once it is completed.

The residents of Calgary use parks as a place of recreation, gathering, and a window on the natural world. Our student project plays an important role as we learn more about the wildlife that use

this natural area within the city limits and we help the general public and decision makers know more. As the city expands its transportation corridors, knowing more about the wildlife should help with planning to conserve natural habitat and ecosystems as much as possible. This

will help ensure that wildlife corridors are protected and enhanced throughout the process. 🐾

Note: the dates on the images are incorrect due to improper set up of cameras.



Figure 1: 2016/03/28,
Image of a cougar captured in
Weaselhead Natural Area, Calgary.

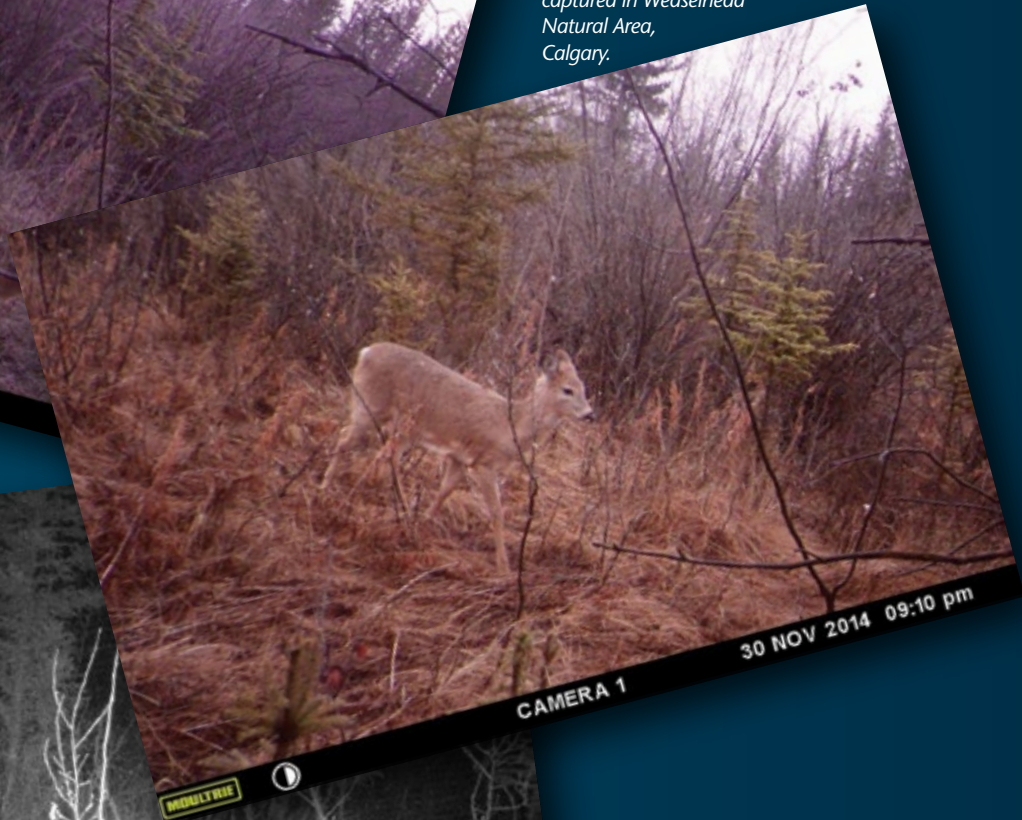


Figure 3: 2016/03/28,
Young White-Tailed deer image
captured in Weaselhead
Natural Area,
Calgary.



Figure 2: 2016/04/02,
Coyote image captured in
Weaselhead Natural Area,
Calgary

Conservation Corner:

The New Wildlife Paparazzi

By Niki Wilson



You're driving down Highway 93 between Jasper and Banff, when you come upon this scene: cars everywhere, people running chaotically about, the route to where you want to go blocked by a motorhome called the *Prowler*. A moment of dread: is it a car accident? No. It's a bear jam.

It's not uncommon to drive around the bend of a highway in one of Alberta's national parks, only to find yourself in some kind of wildlife traffic jam. Bears, elk, sheep, even deer – they all draw the attention of enthusiastic visitors wanting a photo to post to Facebook or show a friend. Although there have always been a few folks that are more aggressive than need be, it appears the incident of roadside harassment may be on the rise.

"Recently, we have been observing a trend of individuals approaching wildlife to a point where it becomes dangerous for both the visitor and the animals," says Steve Young, Public Relations and Communications Officer for Parks Canada. "There have been incidents where food bait has been left for bears and other wildlife just to get a photograph. This habituates the wildlife to food sources that could lead to tragic consequences."

Parks Canada isn't the only one observing the trend. "I see it everyday," says Jasper Tour Company Owner and guide Joe Urie, who's been operating for over a decade in Jasper National Park. He's come upon people throwing rocks at resting bull elk to get them to stand up for photos. He's watched a grizzly chase an elderly man despite repeated warnings (met with a flip of the bird)

from Urie and fellow observers in cars. He's even seen some people approach bears with a camera in one hand and bear spray in the other, willing to risk an encounter to get their shot. "Someone is going to get hurt – it's just a matter of time," says Urie, who's seen more close calls than he can count. And once a bear is provoked to attack, that's usually it for the bear, too.

After years of relatively consistent behaviour in the visiting public, why the change? Urie thinks there are a number of reasons. He's observed a change in the demographic of visitors, noting an increase in tourism from countries like China and India. That would be consistent with Canada's Federal Tourism Strategy that identifies India, China, and Brazil as potential emerging markets, with China being the fastest to grow and most sought



Bear jam, Yellowstone National Park. Photo © Malcolm Manners / Flickr through a Creative Commons license

after. Though Urie is happy to see tourism thrive, he feels an awareness of how to behave around wildlife has not been effectively communicated to new markets.

Young says that Parks Canada has been working hard to maintain natural wary behaviour and ensure the public is well-informed about the consequences of feeding and harassing wildlife. “The Agency has increased our communication efforts and messages on the importance of no feeding wildlife,” says Young. Part of this has been the implementation of the Wildlife Guardians Program, a program Parks Canada says has connected with 80,000 visitors in Jasper National Park alone since 2010.

However, Urie wonders if these communication efforts are overcoming language barriers and other cultural hurdles effectively. He sees busloads of people pull right up to a roadside bear. “The driver lets the entire bus off right beside it,” he says, noting that the guardians don’t have the authority to deal with a public that doesn’t want to follow their suggestions.

As one solution, he suggests perhaps a Qwerty (QR) code could be available to visitors at the park gate and on brochures so that once scanned, information about wildlife could pop up in the language of the user.

The shift in the demographics of visitors to our national parks is one part of a complex issue. Enforcement might be another. While there are provisions in the *Canada National Parks Act* designed to protect wildlife – like fines of up to \$25,000 – we might wonder if Parks Canada has the staff needed to enforce them.

Due to cut backs and increased visitation, Urie suggests Parks Canada officials are overwhelmed by the sheer volume of people at animal jams, or they’re simply not present. “They’re just totally understaffed,” says Urie. Indeed, Federal government cutbacks in 2012 and subsequent staffing adjustments have reduced the number of wildlife-conflict officers in the Mountain Parks block.

Add to that the fact that with social media, people are able to tag and locate wildlife in real time, and you’ve got officials trying to

manage a situation that requires more personnel than they’ve had before.

Tourism is important to local economies, but it’s more than that. If done properly, it can be a vehicle to create connections with, and hopefully protection for, the wild things and spaces visitors come to enjoy. However, to do that properly, new visitors, like those of decades past, need to be educated on how to play their part ahead of time and regulators require the financial and human resources needed to maintain a healthy tourism environment.

With two million visitors expected in a regular year in Jasper National Park alone, and free park passes being offered for all Canadian National Parks in 2017, creating an awareness of how to behave around wildlife is more important than ever. 🐾

Niki Wilson is a multi-media science communicator and biologist living in Jasper. Visit her at www.nikiwilson.com.

Featured Artist Kari Lehr



Crossing

Helene Walsh:

2016 AWA Wilderness Defender Award Recipient



By Andrea Johancsik, *AWA Conservation Specialist*

There once was a hidden Alberta forest. Its massive trees and moist, deep green understory and moss gave it a feeling like the forest in *Avatar*. It was an exceptional place, a remote area called the Chinchaga was northwest of Peace River, on Halverson Ridge. It was a forest coveted by Goliath, in the form of the Alberta Forest Service and forest industry, who only saw trees as rich feedstock for a paper mill.

Helene Walsh, recipient of AWA's Wilderness Defenders Award, saved a piece of this forest in the 800 km² Chinchaga Wildland Park in a David and Goliath fight. This Goliath hadn't met the likes of Helene before. Helene treasured these immense forests not for their timber value but for their intrinsic values. She saw teeming life and beauty, nature's strength and fragility, grandeur, wildness.

Persistent. Resolute. Strong. Those words describe Helene Walsh. She discovered this hidden Chinchaga area and concluded it might be a great example of biodiversity and deserved to be saved for all time. So she canoed down the Chinchaga, a winding river that carried her canoe past great horned owls, moose, and beavers, through beautiful riparian forests. Her ambition was as limitless as the forests of the Chinchaga; she set out to create a 5,500 km² wildland park – roughly half the size of Jasper National Park.

Persistent. Resolute. Strong. This also describes the Chinchaga and other vast Alberta forests, but the difference between them is that Helene has a voice whereas the forests do not.

Unlike some prominent conservationists,

Helene's passion didn't come from growing up in an outdoorsy or tree-hugger family. She recalls a grade-10 field trip as the moment she began to realize the extent of knowledge about the biological world. She was surprised to learn people had *named* plants, no less noticed them!

An interest in the natural world led Helene to take biological sciences in university, and she was awarded a Master in Zoology from the University of Alberta. However, Helene's academic ideals were perhaps ahead of her time, as she would be a perfect candidate to enroll in an Environmental Science degree. This rising field differs from biological sciences in that it studies the connections between natural science, humanities, and social sciences. In conversation with her, Helene wisely summarized to me the basic environmen-

tal science principles: the earth's finite resources are coming into conflict with infinite economic growth and the social order, leading to growing inequity and overwhelmed environments.

After university, some time passed before Helene delved into the world of conservation. It took the rise of the internet to connect Helene, then living in northern Alberta, to the active conservation community to the south. Her first big project was accepting a position on the public advisory group of the Daishowa-Marubeni forest company in the Peace River watershed, as the company's focus turned toward ecosystem based management.

Part of the group's role was to find the requirements of what was needed for proper ecological management practices in the forest industry. Helene hadn't been in touch



Helene and Chinook

with recent zoology or biology information since her university days, so, a true scientist, she studied what she didn't know. And from those studies, she found that in order for forests to survive they have to be both "pretty darn big" and "very diverse!" It became Helene's goal to help develop a boreal standard for the Forest Stewardship Council (FSC) certification scheme that was ethical, transparent, and financially sound.

Helene then worked a decade for the Canadian Parks and Wilderness Society, Northern Alberta chapter, where she was the Boreal Campaign Director. Today she's also a board member of the Keepers of the Athabasca, an arm of a grassroots movement borne from an urgent need to protect the Arctic Ocean drainage basin, of which the headwaters derive from the Peace and Athabasca Rivers in Alberta. Self-effacing in conversation, Helene wouldn't let you in on her accomplishments, but her work has boldly alerted governments, industry, and

fellow environmentalists of the dire need to conserve the boreal forest.

After working for years and speaking up on behalf of Canada's dwindling caribou populations, a red flag for boreal biodiversity issues, Helene's indignation was evident. "It's so simple," Helene mused. "All caribou herds are in decline, the government monitors populations, but we don't see a change. Humans don't have a right to curtail diversity. We're just one species." But due to Helene's dogged determination, the new FSC boreal standard changed the trajectory of forestry in a positive direction toward protection.

Helene has used and even pioneered avenues for conservation in Alberta, including market-based mechanisms, serving on government advisory groups, protesting, and media relations. Her unwavering focus, partnered with a rational and diplomatic approach, is an inspiration to conservationists who work against

well-funded opponents.

However deep Helene's frustrations with conservation outcomes are, she sees hope in youth-driven global movements against climate change and other social and environmental problems. "My main hope is that people want to do the right things, and conditions arrive where change has to happen and it happens in the right way."

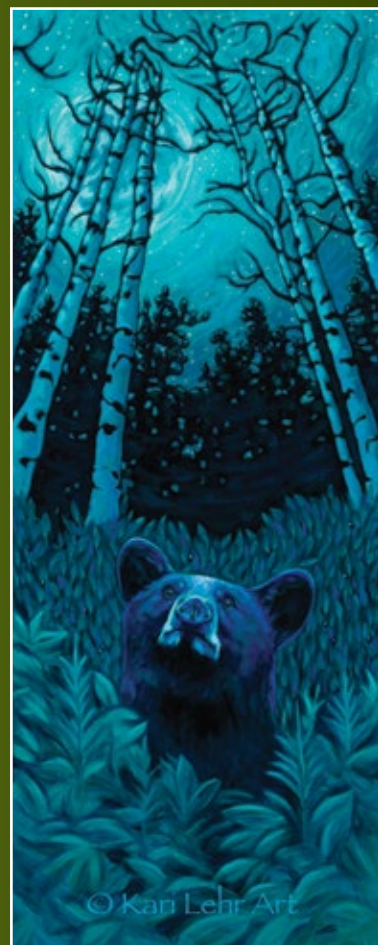
Helene's Chinchaga Wildland contains Avatar-like old growth forests, woodland caribou, trumpeter swans, hundreds of lakes, wetlands, streams and rivers. Most Albertans care about intact landscapes, free flowing rivers, and wild species. Few act with Helene's passion, persistence, intellect, and energy. We need more Goliath-fighters like Helene to ensure we protect more Chinchagas. Thank you, Helene. 🌲

The author would like to thank Cliff Wallis and Peter Lee for their valuable contributions to this article.

Featured Artist Kari Lehr



Interlude
24"X24"
acrylic on canvas



Midnight Blue
16"X40"
acrylic on canvas

Crackdown on Destruction of Public Lands

A July Order in Council allows enforcement officials to issue violation tickets under the Public Lands Administration Regulation. The Order came into effect on August 6 and specifies 41 penalties which may be assessed for contravening a provision of the Public Lands Administration Regulation within Public Land Recreation Areas (PLRAs), Public Land Use Zones (PLUZs), and Public Land Recreation Trails. Tickets range from \$100 for failing to properly leash your pet to up to \$500 for discharging a firearm that endangers people/resources in a Public Land Recreation Area (PLRA).

Other offenses for which officers can now issue violation tickets include a \$250 ticket for driving within 100 metres of a lakeshore in a Public Land Use Zone and \$250 for interfering with the right of others to quiet enjoyment in a Public Land Recreation Area.

This is a step forward in adding more enforcement capacity onto our public lands. Administrative delays when the Public Lands Act Regulation (PLAR) arrived in 2011 meant officers could no longer issue on-the-spot fines. They instead had to send violators to court months after the offence occurred. It's also possible enforcement officers were unwilling to take individuals to court for offences such as failing to leash your pet or failing to comply with kitchen shelter rules,

when it took away from valuable time in the field. That time helps to ensure that our public lands are protected and that people are safe on public lands.

In this way, these ticketable offences also add to the strength of rulings like the \$1,500 fine levied last year against OHV joyriders in the Clearwater River. It allows enforcement officials and judges to focus scarce court time on the big offenders, instead of on the "no-brainers".

Unfortunately, these tickets only apply to PLUZs and PLRAs, which only comprise a

small percentage of the total area of public lands in Alberta. More administrative action is needed to help on-the-ground enforcement do its job.

As AWA has long maintained, enforcement is education: this Order in Council, and we hope another soon to come, will deter further destruction, mismanagement, and lawless behaviour in Alberta's public lands – we hope it won't take people long to learn to behave better when they have to pay fines.

- Joanna Skrajny



Irresponsible OHV users such as this one received a \$1,500 fine for riding in the Clearwater River last year. PHOTO: © W. HOWSE.

Featured Artist Kari Lehr



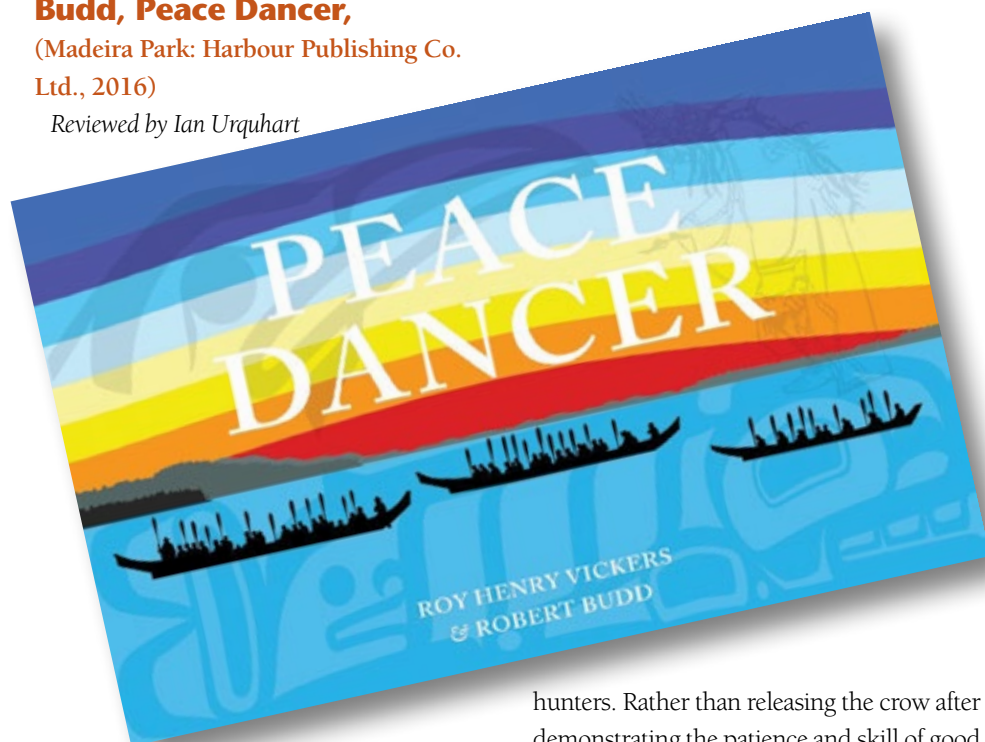
*Miner's Path
30"X30"
acrylic and collage on canvas*

Reader's Corner

Roy Henry Vickers & Robert Budd, *Peace Dancer*,

(Madeira Park: Harbour Publishing Co. Ltd., 2016)

Reviewed by Ian Urquhart



Respect. Responsibility. Love. When these values animate our actions we move closer to living good lives and to being wise stewards of our natural heritage. These values flow through the veins of world-renowned artist Roy Henry Vickers and historian/author Robert Budd and inspire their series of books about the legends of Northwest B.C. Coast peoples. In *Peace Dancer*, their most recent book, they tell the tale of how the Peace Dance came to the people of Kitkatla, Vickers' home village near Prince Rupert on B.C.'s north coast.

Peace Dancer tells the story of what befell the Tsimshian when the people lost touch with ancient traditions. The story opens with an idyllic portrait of life in Kitkatla. Elders sang beside the warmth of their home fires, adults fished for salmon, children played, and the seas were calm. The children, aspiring to be good hunters like their parents, thought it wise to make a trap to see if they could catch a bird or other animal. They succeeded. Their box trap caught a crow that couldn't resist the bait set by the young

hunters. Rather than releasing the crow after demonstrating the patience and skill of good hunters the children wanted to keep it. To cripple the crow's ability to fly away the children plucked so many of the bird's feathers that it could no longer fly. They made the crow their prisoner.

The children's lack of respect for the crow angered the Chief of the Heavens. The Creator decided to punish the village for this behavior. Week after week their community was battered by severe storms; it seemed the rain and wind would never end. The people begged the Chief of the Heavens to stop the storms that were destroying their homes and flooding the land.

The Creator was unmoved until an elder had a dream. In that vision the people could return home if they found their way again, remembered the ancient ways, and taught their children the ancestral laws of love and respect. The people's promise pleased the Creator. The Chief of the Heavens stopped the storms and brought peace again to the world.

The Peace Dance was initiated to remind the people of the need to show respect and

love to all of the Creator's creatures and to the land. A chief, blessed with the power of healing, is chosen to be the Peace Dancer and to perform a special song and dance at potlatches (ceremonial feasts). The dance reminds the people of the time when they lost their way and caused floods to cover all of the land.

Peace Dancer, like *Orca Chief* – the third book of the Vickers/Budd series, stresses the responsibility we have to the natural world and to the creatures who we share it with. *Peace Dancer's* message is timeless. Its presentation is as impressive as are the stunning illustrations by Vickers that complement the text. *Peace Dancer* is a wonderful addition to any family library. Its call for respect, responsibility, and love for nature is as powerful now as it was when Vickers' ancestors first told this story thousands of years ago.



Fall Events

EVENTS

AWA's outreach events and annual celebrations are coming up in October and November. Due to the limited availability of tickets AWA recommends you purchase tickets in advance online or by telephoning the AWA office. We don't want you be disappointed to find out that an event is sold out!

OCTOBER 15, 2016

Music for the Wild: Natasha Sayer and Christie Simmons

A fabulous evening of music and song in our perfect folk setting
AWA Cottage School - 455 12 Street NW, Calgary
Music at 7:30pm, doors open at 7:00 pm
\$20.00

OCTOBER 18, 2016

Bison Restoration in Banff National Park – Karsten Heuer

Reintroduction of the extirpated plains bison into Banff National Park will begin this winter.
AWA Cottage School - 455 12 Street NW, Calgary
Bison Reintroduction Project Manager for Banff National Park
Talk starts at 7:00pm, doors open at 6:30pm
AWA Cottage School - 455 12 Street NW, Calgary
\$5.00

OCTOBER 22, 2016

Edmonton Autumn Splendor

Snow Valley Ski Club (13204 45 Ave NW, Edmonton)
Join us to celebrate a successful year!
\$60.00

NOVEMBER 18, 2016

Annual Martha Kostuch Wilderness and Wildlife Trust Fund Lecture

The Will of the Willmore – Wild and free, the legacy is ours to defend
Wilderness Defenders Awards will be presented
Reception including refreshments 6:00pm
Lecture and Awards 7:00pm
AWA Cottage School - 455 12 Street NW, Calgary
Members \$50.00 • Non-members \$75.00

AWA ANNUAL GENERAL MEETING

November 19, 2016 10:00 am
AWA Cottage School 455-12st NW, Calgary

For a complete list of AWA hikes and tours go to: Albertawilderness.ca/events



"The Castle" © C. OLSON

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