

A WILDLANDS ADVOCATE



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Cover Photo

Lu Carbyn studied the wolves of Wood Buffalo National Park for decades. *The Buffalo Wolf*, Lu's account of studying the wolf/bison relationship in Wood Buffalo National Park, is as compelling as this photograph.

PHOTO: © L. CARBYN



Featured Artist: Bonnie Curran

Growing up on a farm in Southern Alberta, Bonnie's love of Nature developed at an early age and has continued throughout her life.

Working mainly in acrylics and in watercolour, Bonnie is inspired by the way light illuminates, reflects and transforms her subjects. She uses the magic of light to create impact in her work. She strives to express her love of nature through her paintings and hopes to inspire her viewers to a greater appreciation of our beautiful landscape.

Hiking in the mountains with Ed Hergott's Mountain Manics almost every Tuesday for the past fourteen years, has been a great blessing for Bonnie. Much of her inspiration has come from those weekly outings, leading her to create realistic landscapes, which often include fellow hikers.

Bonnie has completed Art courses at the University of Calgary, ACAD and Red Deer College as well as workshops with many talented artists.

A former member of the Federation of Canadian Artists and RiverView Artists, she continues to show her work with the Art Horizons Art Group. Her paintings can be found in many private collections.

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I Feel the Earth Move Under My Feet...

On the evening of May 5th more than a few Albertans – okay, grey-haired Albertans – might have been tempted to hum or sing Carole King's song "I Feel The Earth Move." If you weren't around when King's song went to the top of the Billboard chart in 1971 it's a song about what love may do to you. Love may make you feel like the ground is moving under your feet, like the sky is tumbling down, like your heart is trembling. You might not have felt the love on May 5th but I'd be surprised if you didn't feel at least a little bit of shaking under your feet when the provincial New Democratic party swept to power.

Many kinds of history were made that night. A 44-year political dynasty crashed and burned. Former Premier Prentice became the first Progressive Conservative party leader since 1967 to lose an election. Rachel Notley's New Democrats formed the government for the first time in Alberta's history. No governing party can boast a higher percentage of women in its caucus than Notley's New Democrats.

Will Alberta now make environmental and wilderness protection history? That's a burning question I want answered with an emphatic "yes."

In Environment and Parks Minister Shannon Phillips I think Albertans have

a bright and articulate minister whose personal inclination will be to build the political support needed to further many of the goals AWA cares so deeply about. I don't expect miracles and I don't expect the conservationist agenda to get everything it deserves by tomorrow morning. Improvements will not happen overnight to all the agenda items that matter to us.

But I do think that, in light of the Progressive Conservative government's record, there is some very ripe, low hanging fruit on the environmental tree begging for harvest. Protecting the Castle is such a fruit. When it came to protected areas the New Democrats pledged specifically and categorically: "we will protect the Castle Wilderness Area." Keeping this promise is something I expect the new government to do over the next year.

Climate change and renewable energy are two interconnected files I also expect Environment and Parks to act on positively over the next year. The New Democrats pledged to phase out coal-fired electricity. Washington State, which is phasing out TransAlta's Centralia coal-fired electricity plant, may offer an example Alberta should follow. Let's make that a goal of the environmental history we want to make in Alberta.

Before the end of June, Minister Phillips has promised to unveil a new Specific Gas Emitters Regulation. Currently one way a major greenhouse gas emitter can comply with Alberta's greenhouse gas (GHG) program is to pay \$15 per tonne of GHG emitted. The fact more tonnes of GHG are accounted for through this fee than through actual emission reductions at coal and oil sands plants is telling. It reveals it's often cheaper for large companies to pay the fee than to reduce their emissions. Surely this fee must jump markedly when the new regulation is introduced.

It's at least as important for the government to do something about how these funds are currently spent. In some respects, the Climate Change and Emissions Management Fund, the pot into which these dollars are poured, seems to resemble a "carbon washing" scheme. Big greenhouse gas emitters pay their \$15 per tonne of GHG emissions; carbon energy companies then receive millions of dollars to reduce their GHG emissions. Imperial Oil, MEG Energy, Suncor, CNOOC, and Devon have taken (back) more than \$36 million in promised assistance from this fund. I'd like to see much more of these funds pledged to the non-petroleum energy sector. Why not use all of these dollars to stimulate the provision of renewable energy?

Space on this page is running out and I've barely got started on what I think is politically feasible for our new government to accomplish with respect to the environment. Politically feasible? Absolutely, if you believe what writers such as Mark Lisac and Chris Turner have said about Alberta for some time. Our home isn't decorated nearly as conservatively as conventional wisdom suggests. Believe it.

-Ian Urquhart, Editor

Canada's Greater Sage-grouse Begin their Long Road to Recovery

By Sean Nixon Staff Lawyer,
Ecojustice Canada and
Mark Boyce, PhD, Professor of Ecology,
University of Alberta



The greater sage-grouse (*Centrocercus urophasianus urophasianus*) is listed as “endangered” under the federal *Species at Risk Act*. Since 1988, more than 90 percent of these iconic birds have disappeared from Canada’s prairies. They are highly sensitive to disturbance. Industrial activity, particularly oil and gas development, threatens their survival and recovery. Research shows that when confronted with oil and gas development sage-grouse chicks fail to survive and adults abandon their leks (central courting and breeding grounds) and other habitats crucial to their survival.

The provincial governments in Alberta and Saskatchewan have claimed to take primary responsibility for protecting the sage-grouse and its habitat, but for decades they did little more than watch while the species declined sharply towards extinction in Canada. Only 17 males were counted at leks in Saskatchewan in 2012. In the spring of 2013, only 14 males remained in Alberta. Then, in December of 2013, something remarkable happened: for the first time in Canadian history, the federal government stepped in to provide emergency protection for a “provincial” species. The emergency order first came into effect in the spring of 2014. While the sage-grouse still faces a long road to recovery, the early results of the federal emergency protection order are encouraging indeed.

Historic population declines and recent signs of recovery

The sage-grouse is the largest of all North

American grouse and is best known for the males’ strange and wonderful courtship dances at prairie leks in the spring. This annual ritual gives biologists an opportunity to count the number of males as an index of the species’ local abundance. The total population is at least twice the number of males, and some studies have found nearly twice as many females as males.

Sage-grouse once numbered in the thousands and could be found throughout British Columbia, Alberta, and Saskatchewan’s sagebrush grasslands. Sage-grouse need large blocks of unfragmented sagebrush grassland habitat to thrive. Their range has been reduced to only six percent of its historic extent because of habitat loss and degradation. They are now found only in small pockets of southeastern Alberta and southwestern Saskatchewan.

The counts in the spring of 2014 were the worst ever. Only six males were counted in Saskatchewan; only 14 males were counted in Alberta.

Roughly a year after the federal emergency protection order came into effect, the counts in the spring of 2015 tell a completely different story. This year, 20 males were counted in Saskatchewan, a 233 percent increase over 2014. Thirty-five males were counted at four leks in Alberta, up 150 percent from 2014. This is the biggest population increase since 1995.

This is finally starting to sound like a good-news story and hopefully one that will end with the full recovery of the sage-grouse in

its native sage-brush habitat in Canada. That would be good news for other species as well: the sage-grouse shares its habitat with many other sensitive prairie species, including the burrowing owl, swift fox and Great Plains toad.

The convoluted path to federal protection of the sage-grouse and its habitat

Canada’s federal *Species at Risk Act* (or “SARA”) came into force in 2004. The sage-grouse was included on the initial “legal” list of species at risk, meaning that the federal environment minister had a duty under SARA to prepare a recovery strategy for the species by June 2007.

A recovery strategy is meant to be an objective scientific prescription about what a species needs if it is to recover in Canada. Perhaps the most important element of a recovery strategy is a careful mapping of the species’ “critical habitat” – namely, the habitat it needs to survive and recover – based on the best available scientific information. Habitat loss has been the primary cause of decline for most of Canada’s species at risk.

In 2008, several months after the mandatory SARA deadline, the Environment minister released a sage-grouse recovery strategy that didn’t identify any critical habitat at all. This was based on the minister’s somewhat remarkable claim that “knowledge gaps” prevented the mapping of any such habitat. That led to the first court case related to the species.



PHOTO: © C. OLSON

In 2009, lawyers from Ecojustice represented a coalition of environmental groups in the Federal Court of Canada and successfully challenged the minister's failure to identify sage-grouse critical habitat. The coalition (consisting of AWA, the Federation of Alberta Naturalists, Grasslands Naturalists, Nature Saskatchewan, and the Wilderness Committee) successfully argued that parts of sage-grouse critical habitat, including the leks, were well known and had already been clearly identified in published, peer-reviewed literature. The Federal Court issued an order requiring the minister to amend the 2008 recovery strategy to include some critical habitat in Alberta and Saskatchewan.

The amended recovery strategy released in early 2009 acknowledged that additional critical habitat was necessary to ensure the survival of the species in Canada. It promised that the minister would add this additional critical habitat by 2011.

When the minister failed to keep this promise, and prompted by an alarmingly sharp recent decline in the remaining population of sage-grouse, Ecojustice lawyers brought a

second court case in 2012 on behalf of another coalition of environmental groups. This second coalition (consisting of the AWA, Wilderness Committee, Nature Saskatchewan, and Grasslands Naturalists) sought to force the Environment minister to do two things: first, identify the promised additional critical habitat for the sage-grouse; and second, recommend a federal emergency order under SARA to protect the species and its habitat.

The second court case never needed to go to a full hearing on its merits. Before the Court heard the case, the federal government issued an emergency order to protect the sage-grouse. They also released an amended recovery strategy late in 2014 that identified a significantly larger area of critical habitat for the species. In our view, sage-grouse will need even more critical habitat identified and protected if they are to recover in Alberta and Saskatchewan; but the 2014 recovery strategy is a promising step in the right direction.

The future: tragedy or happy ending?

While it is impossible to predict what will

happen to Canada's sage-grouse, we feel confident that things are looking up. The federal emergency protection order seems to be doing what it should. The recent increases in lek counts are likely related to the new protections offered by the emergency order and to good nesting conditions in the spring of 2014.

In the long term, the survival and recovery of the sage-grouse will require a concerted joint effort from the provinces, the federal government, industry, environmental groups, and private citizens.

We think it will be worth it. A prairie sagebrush landscape without these fascinating birds would be a diminished place. Canadians deserve more, as do the sage-grouse and the rich prairie ecosystems they inhabit. ▲

** Sean Nixon's views as expressed in this article are his own, and are not made on behalf of any clients he has represented or currently represents.*

Greater Sage-grouse: The Business of Building Relationships

By Nora Spencer, *AWA Conservation Specialist*



Once widespread across the prairies, the greater sage-grouse was designated as an endangered species by the *Species At Risk Act* (SARA) in 1998. Degradation and fragmentation of habitat and human disturbance (mainly industry) contributed to a greater than 90 percent decline of the species in Alberta and Saskatchewan since the late 1960s. Despite the endangered status of the species, sage-grouse numbers have continued to decline and there have been woefully inadequate efforts to protect and restore habitat and to prevent further industrial activity. Failed recovery efforts led to an Emergency Protection Order (EPO) that was put into place in December 2013. The protection order applies to specific critical habitat for greater sage-grouse on public land. Under the order no new industry is permitted; existing industry must make changes to when travel on roads takes place and reduce noise levels at sensitive times for sage-grouse.

Alberta Environment and Parks (formerly Alberta Environment and Sustainable Resource Development) is implementing the recovery strategy developed and adopted in the spring of 2014. They have inventoried and started to remove abandoned structures, thereby reducing perches and residences for predators, while selectively reducing ravens and crows. They are also monitoring the birds that were translocated from Montana and know that they have had some success in reproducing.

AWA has also been busy since the EPO was put into place. AWA has focussed on working with the ranching community to create awareness and to help with the recovery effort for sage-grouse. We have been fortunate to partner with the Heydlauff family (one of the few ranches in southeastern Alberta where sage-grouse are still present) and are working with them to document the ecological history of their ranch. This document will help determine landscape and grazing patterns changes over time and help us better understand how these changes may have affected not just the sage-grouse but many other species at risk found in southeast Alberta. This step is helping AWA develop a ranch plan for sage-grouse management. This plan could become an important tool for ranches throughout Alberta where dedicated stewardship guides their place on the landscape.

AWA has also been reaching out and strengthening ties by attending a sage-grouse conference in Idaho with the Heydlauff ranchers and partners from Saskatchewan, Montana, and Idaho. As well, we have participated in a sage-grouse workshop at the

Calgary Zoo to develop a tri-jurisdiction directive to help manage the sagebrush areas in Alberta, Saskatchewan and Montana. AWA also led a tour through southeast Alberta and Saskatchewan to create awareness of what the emergency protection order meant, who was affected by it, and to introduce colleagues from the U.S. and funders to the area. None of these efforts by AWA would be possible without generous financial support from dedicated individual donors: the National Fish and Wildlife Foundation (NFWF), the Canadian Energy Pipeline Association (CEPA), and Enbridge.

As Sean Nixon and Mark Boyce pointed out in the previous article, sage-grouse numbers are up Alberta and Saskatchewan. While we agree with them that the emergency protection order has contributed to these promising increases, AWA thinks it is also important to note that the warmer winter may have also increased their survival.

The emergency protection order looks very much like a good first step. But, there is still a lot of work to be done and there are no quick fixes. We need to protect the landscape, restore what habitat is there for sage-grouse, continue removing abandoned structures on industrial sites and ranches to help reduce predation, flag fences, and implement all aspects of the recovery strategy and EPO. There also needs to be a commitment from the federal government to provide funding for landowners and leaseholders to help with the recovery efforts. AWA plans to continue building relationships with ranchers, working on the ranch plan, and taking a field tour of the Heydlauff ranch this summer. ▲



PHOTO: © C. OLSON

Alberta's *Wildlife Act*:

Insights from a U of C Environmental Law Class

By Brittany Verbeek, *AWA Conservation Specialist*



I was able to get a small taste of being an environmental law student in March when I was invited to sit in on Professor Shaun Fluker's University of Calgary 'Law of Species and Places' class. The topic of the day: Alberta's *Wildlife Act*. I was both fascinated and disturbed to learn just how inadequate the Act is when it comes to recognizing and protecting effectively endangered species in Alberta.

To provide a bit of background, legislative frameworks for endangered species across the country largely were sparked by Canada's ratification of the United Nations Convention on Biological Diversity in 1992. To uphold this international treaty, Canada developed a national biodiversity strategy in 1995 and seven years later Parliament passed the *Species at Risk Act* (SARA). During that same time period Alberta signed the *National Accord for the Protection of Species at Risk*, an agreement to work collaboratively with other provinces, territories, and the federal government to develop laws and policies for protecting species at risk and their habitats.

Shaun believes that anyone who seeks meaningful legislative protection for threatened species in Alberta must advocate not only for federal legislation but also for strong provincial laws. Despite SARA being an important tool, it's generally limited to federal lands and to species falling under federal legislative powers, such as fish and migratory birds. Of course the majority of land in Alberta is property of the provincial Crown and most of the habitat of endangered species in need of protection is located outside national parks and other federal lands. As we've seen in the case of the greater sage-

grouse SARA may be invoked on non-federal lands with respect to "non-federal" species. Section 34.(2) allows the federal cabinet to extend its authority to provincial lands and species. However, in part due to the fact the environment is an area of shared federal-provincial jurisdiction, SARA assumes that provinces will introduce their own species at risk legislation. All of this highlights the need for provinces to have their own endangered species laws in place.

Unlike many other Canadian jurisdictions, Alberta does not have stand-alone endangered species legislation; the *Wildlife Act* remains dominant with respect to species at risk management. The January 2009 document *Alberta's Strategy for the Management of Species at Risk (2009-2014)* committed the province to: "Examine whether a provincial *Species at Risk Act* would enhance the current legal measures provided under Alberta's *Wildlife Act* to accommodate species at risk in the province." Yet, there doesn't appear to be any public evidence this examination ever took place.

The *Wildlife Act* was born long before concern arose about and commitments were made to biodiversity at the national and international levels. The Act was the child of a resource conservation/hunting ethic; today's belief that species protection should be a core element of wildlife management didn't receive serious consideration. AWA has advocated for years that our wildlife policy, act, and regulations represent neither contemporary science nor the public's regard for wildlife. They need significant makeovers. The Alberta government amended the *Wildlife Act* in 1996 to comply with its commitment

to the National Accord and added rules for designating and protecting endangered species. However, based on what I heard from Shaun and his students, I wouldn't suggest Albertans should hold their breath waiting for the Act and its supporting regulations to change to ensure the protection and recovery of our many endangered species.

I took the following away from the class discussion.

The *Wildlife Act* is focused heavily on hunting. It classifies wildlife as game and non-game species, and its regulations address subjects such as hunting, trapping, and possessing wildlife. The Act does not adequately address many of today's wildlife concerns such as habitat requirements and endangered species. In fact very little of it is dedicated to endangered species management; only section 6 regarding the Endangered Species Conservation Committee (ESCC) and section 36 prohibiting the disturbance or destruction of a species' residence (although with exceptions) touch on this subject.

The greatest flaw with the *Wildlife Act* seems to be that virtually all aspects relating to species at risk management are at the discretion of the Minister. As Shaun put it: "The Alberta government has elected to govern endangered species almost entirely by policy and the use of discretionary power behind closed doors."

This begins at the fundamental level of a definition. *Alberta's Strategy for the Management of Species at Risk (2009-2014)* defines threatened and endangered species as distinct categories: (1) an endangered species is one facing imminent extirpation or ex-

inction; (2) a threatened species is one likely to become endangered if limiting factors are not reversed. But under the *Wildlife Act* there is no such distinction. An endangered or threatened species is essentially defined under the Act as a species that the Minister designates as such.

The Minister is required by the Act to establish and maintain the ESCC (mentioned above), a committee whose role is to recommend which species should be listed as endangered and then advise on the preparation and implementation of their recovery plans. The *Wildlife Act* also requires the ESCC to appoint a subcommittee of scientists to assess the status of species and report back on whether the species should be listed. This may sound positive but there is no legal requirement to ensure the members of the ESCC or the subcommittee have any of the necessary expertise or qualifications. There is no legal process to direct how, when, and on what basis ESCC decides to assess a species. To top it off, ESCC recommendations can remain under the Minister's consideration indefinitely; the law doesn't set a timeline/ deadline for a decision.

Section 6 of the Act mentions recovery plans. But whether or not a recovery plan is developed, how long it takes to develop such a recovery plan, and its contents are once again wholly at the discretion of the Minister. The image I immediately conjured in my mind when I learnt this was laughable. A long line up of species— a whooping crane, a swift fox, a limber pine tree, a short horned lizard along with many others – waiting and practicing their speeches to convince the current minister of their worth.

This discretionary framework produces other shortcomings of the Act – the complete lack of predictability, transparency, and accountability in the entire process. Legally, the Minister does not need to justify or release to the public any decisions pertaining to species at risk in Alberta. And, as many Albertans have witnessed, the absence of statutory deadlines and obligations deepens the dire straits many of the province's species find themselves in.

Nonsensically, even in conservation areas and wildlife sanctuaries the Minister may authorize certain activities. The end result? There is no meaningful protection for species

habitat under the *Wildlife Act*.

This is not to say there aren't other ways provincial agencies can protect wildlife species. Requirements may be added through permitting processes; terms and conditions may be attached to development approvals. The 2013 Integrated Standards and Guidelines document of the Alberta Energy Regulator (AER) speaks to wildlife surveying and monitoring, species at risk protection, and set back requirements. There are many other provincial policy documents, including the *Land-use Framework* and its underlying regional plans, which describe the importance of biodiversity and species at risk recovery. Policies can be excellent guiding tools for governments but they can also simply be smoke and mirrors when there isn't effective legislation to support and enforce them. This is the case in Alberta regarding species at risk.

Reflecting on what I learnt in that classroom, I understand much better why Alberta badly needs stand-alone species at risk legislation to address effectively some of the problems plaguing the current provincial legislative framework. It also reinforced how important it is for Alberta's wildlife legislation to reflect the following value statements:

- AWA believes that wildlife in Alberta should be valued not just for their “usefulness” as a resource, but also for their own intrinsic value. The majority of Albertans do not consume wildlife, but value them in their own right. This applies not only to endangered or threatened wildlife, but to all wildlife.
- Wildlife should not be managed for the benefit of hunters, trappers or game farmers; wildlife shouldn't be managed for the benefit of farmers, or city-dwellers or oil executives. Wildlife should be managed for all Albertans and for the benefit of the species themselves. For this to happen, the provincial *Wildlife Act* and its policy and regulations require a thorough and public revision.

These statements have long been part of the AWA mantra. Don't expect to see them disappear any time soon. 🐾

Featured Artist Bonnie Curran



Ancient Guardian of the Forest, acrylic, 16" x 20"
PHOTO: © B. CURRAN

Towards a biodiversity policy for Alberta



By Dr. Richard Schneider

In 1995, Alberta became a signatory to the Canadian Biodiversity Strategy, establishing our commitment to the conservation of biodiversity. Despite this commitment, Alberta's species and ecosystems are today substantially worse off than they were 20 years ago. What has gone wrong?

Part of the problem is that our commitment to biodiversity was never followed up with an effective strategy or policy designed to achieve it, other than responding to catastrophic failures once species become critically endangered. Like the explorers of old searching for the new world, we have a rudimentary notion of where we would like to go, but no map or real understanding of how we are going to get there. Second, Alberta's landscapes are very busy. No province or territory outside of the Maritimes has an industrial footprint as extensive as that in Alberta. Given this combination of circumstances it should come as no surprise that our wildlife and wild places have not been faring well.

The fundamental change that needs to occur, if we hope to improve biodiversity outcomes in the future, is a shift to integrated land-use planning. There are simply too many players on the landscape with too many conflicting objectives for the old "all you can eat" approach to land management to work. Trade-offs and compromises are now a fact of life in Alberta and it is better for these types of decisions to be made in a structured and transparent planning forum than to deal with conflicts and problems after they

arise in the field. This is especially true for biodiversity, where the understanding of long-term outcomes and proactive decision making are critical for preventing gradual and irreversible declines.

A transition to integrated planning is now underway in Alberta, but remains a work in progress. The critical first step was the release of the *Alberta Land-use Framework* in 2008, providing general direction for the development of regional land-use plans. But the Framework is very generic and does not provide the level of guidance needed for achieving specific outcomes. In particular, there remains an acute need for a comprehensive policy on biodiversity. This policy needs to set forth biodiversity objectives in terms that are meaningful to planners and managers. What do terms like "conserve" and "maintain" actually mean in practice? The policy also needs to provide strategic guidance for how biodiversity outcomes are to be achieved; that is, it should serve as a roadmap for getting us where we want to go.

Biodiversity Objectives

Articulating the policy's objective may seem straight forward — we want to conserve biodiversity — but there are pitfalls to be avoided. First, we need to ensure that we do not confuse what we want to do with why we want to do it. The policy's statement of intent needs to remain focused on the conservation of biodiversity, not on higher-level outcomes such as societal prosperity and quality of life. This is an issue because of a growing

trend within government to link biodiversity with ecosystem services (i.e., the benefits that biodiversity provides to humans). The rationale is to build support for conservation by broadening its appeal to a wider audience (based on the motivational power of self-interest). There is merit to this argument, but caution is warranted. Once we begin thinking about nature primarily in terms of the direct benefits it provides, land-use conflicts start to look like engineering problems. For example, our forests provide oxygen, erosion control, wood products, hunting opportunities, and jobs. But so do plantations of non-native trees, and they mostly do a better job of it in terms of direct benefits to humans.

Another concern with linking conservation to ecosystem services involves threatened species, most of which are sensitive to human disturbance and therefore often in conflict with resource development initiatives. These species are usually rare, and in many cases their loss from an ecosystem would have little discernable impact, either ecologically or economically. Their continued existence depends primarily on their intrinsic right to exist rather than on any direct benefits they provide.

Given these cautions the intent of the biodiversity policy should remain squarely focused on maintaining biodiversity, not on the delivery of ecosystem services. The many benefits that biodiversity provides to us should certainly be highlighted, but as context. Moreover, we should not get carried away. Most Albertans un-

derstand that we have a moral obligation to share the land with native species and this conviction should remain paramount in the policy document.

Another potential pitfall in articulating the objective of the biodiversity policy is a failure to provide sufficient clarity. It is fine to say that we aim to maintain biodiversity, but for the policy to provide effective guidance to planning teams, additional detail is required. What is it, exactly, that we hope to maintain? Terms like “health,” “integrity,” and “function” are not useful because they are too subjective and too difficult to measure. After all, a wheat field is a functioning ecosystem. We need instead to link the concept of maintenance to a specific reference landscape, characterized using terms that are measureable, practical, and meaningful. Key features to be included are species composition, structure, pattern, and process, measured at multiple scales.

The remaining issue is what to use as the reference landscape. The current state of the landscape is not an appropriate biodiversity baseline because some areas have experienced significant declines in habitat quality as a result of industrial development and agricultural conversion. On the other hand, we are not about to roll back the clock on European settlement so using something like the preindustrial landscape as our reference seems problematic as well.

This dilemma is resolved by understanding the role of the biodiversity policy in the broader context of land-use planning. Given competing interests and a finite landscape, compromise solutions are inevitable. But the biodiversity policy is not the place for those compromises to be made; that is the function of integrated plans. The biodiversity policy should instead provide clarity around what the *desired* biodiversity outcomes are, irrespective of other land-use objectives or historical use. This means that the natural state (or an estimate of it) is the appropriate baseline after all, providing the best starting point in the search for opti-

mal land-use solutions. This baseline will not be achievable everywhere; in some areas human development objectives will be paramount. But the important point is that whenever compromise is required we will always understand what we are giving up.

Strategic Direction

The biodiversity policy's other major task is to provide strategic direction with respect to how the biodiversity objectives are to be achieved. There is much material to draw on, including more than 30 years of research in the field of conservation biology. Moreover, countless hours have been spent developing workable conservation strategies as part of earlier planning initiatives, including (but not limited to) *The Alberta Forest Conservation Strategy* (1997), *The Northeast Slopes Strategy* (2003), and the *Terrestrial Ecosystem Management Framework* (2008). The biodiversity policy should build on these earlier efforts.

Protected areas are the cornerstone of biodiversity conservation and should be included as one of the core strategic directions of the biodiversity policy. The establishment of new conservation areas was integral to the development of the *Lower Athabasca Regional Plan* but this precedent was not effectively carried over to the South Saskatchewan Regional Plan. The biodiversity policy should set forth clear direction for protected area planning in future regional plans. It should reference state-of-the-art conservation planning and the *Convention on Biological Diversity's* commitment to protect 17 percent of all major ecosystem types.

The policy should also include conservation strategies applicable to the managed landscape. In particular, the policy should reaffirm the commitment to cumulative effects management made in the *Land-use Framework* and provide specific guidance for the development of regional biodiversity management plans. This should include direction on the selection of biodiversity indicators (that

link back to the reference state), the implementation of an effective monitoring system, and the setting of thresholds for management action. Guidance should also be provided concerning proactive management approaches (e.g., harmonized road construction) and appropriate management responses when biodiversity thresholds are crossed.

Another important strategy, applicable mainly to public lands, is the emulation of natural disturbances. The idea is to adapt industrial practices and rangeland management such that the patterns and intensities of human landscape disturbances approximate those from natural disturbances such as fire or bison grazing. Other strategies applicable to public lands include minimizing barriers to species movement and managing human access where it is having a detrimental effect on wildlife.

For private lands, the policy should include strategies to encourage land stewardship and conservation-oriented agricultural practices. More generally, the policy should include communication strategies designed to raise awareness of biodiversity benefits as well as issues of concern. Last but not least, direction should be provided for future research efforts, into both ecology and effective management approaches for maintaining biodiversity.

Former Premier Prentice stated: “Alberta must become a world leader in environmental stewardship or risk being left behind.” Nothing could be truer and I hope the Notley government will see the release of a biodiversity policy along the lines described in this article as an obvious step in that direction. ▲

Dr. Richard Schneider is a wildlife ecologist affiliated with the Alberta Biodiversity Chair at the University of Alberta.

Science, uncertainty, and ethics in the Alberta wolf cull

(Population ecology 101)

By Dr. Adam T. Ford



Lambda – λ . It's a Greek letter that looks like a squiggly triangle and adorns the facades of college-town fraternity houses. Lambda is also one of the most important numbers that biologists want to know when studying animal populations. In biology parlance, lambda is the rate of population change – the number of new individuals added to or removed from the population for every current individual. When lambda is above 1, say 1.10, a population of ten individuals will be eleven next year, and twenty-six individuals by year ten. When lambda is between 0 and 1, the population is in decline. At a lambda of 0.9, a population of ten animals will decline to nine in year one, and three by year ten.

In conservation parlance, a lambda below 1 can be a red flag. It's a call to action with three important implications: (1) the recognition that something has gone wrong in our management of the landscape; (2) the need to identify the cause of population decline; (3) the need to find a solution that reverses the cause of decline.

For twelve of Alberta's sixteen herds of woodland caribou, lambda is below 1, and nearly so for the remaining herds (Hervieux et al. 2013). Since 1996, the population of many herds has declined by 30 to 90 percent with all herds showing the same downward trend in their population trajectory. The red flag has been raised – caribou are listed as 'threatened' by Alberta's Endangered Species Conservation Committee and the Committee has recommended changing the listing to the more perilous status of 'endangered'. But

two crucial questions loom over the decision-making landscape: what is the cause of these declines and what actions should be taken to stem the decline.

A common, causal thread

For many biologists, increased wolf predation is regarded as the cause of caribou declines. Apparent competition is one of the more popular hypotheses. This hypothesis suggests that landscape disturbance has benefited the primary prey of wolves – deer and moose. With an increasing amount of 'wolf food' on the landscape, wolf populations have increased. Even though caribou are not an important part of wolf diets, the overall increase in the number of wolves means the number of caribou succumbing to predation by wolves has increased. Increased predation by black bears has also been hypothesized, although little data exist to test this possibility. Another hypothesis – the functional response – argues that landscape disturbance has increased the mobility of wolves while they are hunting. As a result of increased mobility, wolves more easily encounter their prey – caribou included. Over time, this means that more wolf-caribou encounters occur, further increasing predation on declining caribou populations.

Stress is a third hypothesis. Samuel Wasser argues that landscape disturbance has increased the release of stress hormones in pregnant caribou, thereby reducing the number of new, healthy, caribou calves entering the population.

It is likely that all of these hypotheses are

correct to an extent. The common thread tying these hypotheses together is industrial development, approved by government, within the caribou range and hence should be regarded as the ultimate cause of population decline for caribou.

So, what solutions are being proposed? As readers of the *Wild Lands Advocate* will recall, imposing wildlife conservation objectives on industry has not been something the Alberta government has done very often or very meaningfully in recent years.

Schneider, Hauer, Adamowicz, and Boutin recently highlighted the relative costs and benefits of conserving woodland caribou in Alberta. Their 2010 study estimated that fully protecting all caribou ranges from new energy and forestry development would cost upwards of 100 billion dollars in lost resource revenue; restoring disturbed areas would cost several hundred million dollars. They suggested that, by comparison, a 50-year wolf control program would only cost "a few tens of millions of dollars," with an estimated caribou lambda of 1.1 as a positive outcome. They concluded that it would be 'desirable' from an economic standpoint to maintain caribou through wolf culling alone. It is hard to argue dollars-and-cents with the government, so it's not all that surprising what management actions have occurred in Alberta. Kill wolves.

Action, uncertainty, and ethics

In 2005, the government of Alberta began an experimental wolf cull in the range

of the Little Smoky (LS) caribou herd. The results of this experiment were published recently by government biologists Dave Hervieux, Dave Stepnisky, and Michelle Bacon and researchers from the University of Alberta and the University of Montana. The authors concluded: “Predator reduction by itself may be an effective short-term strategy to reduce the risk of population extirpation of an endangered species facing declines due to apparent competition.” The results of this study raise a number of questions regarding the science used to justify continued culling of Alberta’s wolves.

It is not clear that predation was reduced by the cull. In the twelve year duration of this study, 733 wolves were killed by aerial shooting (from a helicopter) or by strychnine poisoning. An additional 108 wolves were killed by fur trappers during the cull. Few would disagree that a lot of wolves died during this study. But culling wolves leaves behind empty territories that can often be re-occupied quickly by animals dispersing from neighbouring packs. In addition, wolf packs with fewer members often produce more young than larger packs. For these reasons, the overall abundance of wolves may not decline even in the face of the cull. In a 25-year study conducted throughout Montana, Idaho, and Wyoming, wolf culling actually *increased* the number of livestock killed by wolves. Indeed, the Hervieux study reported a 50 percent *increase* in the number of wolves captured by trappers in the culling area compared to pre-culling – a result consistent with an influx of new wolves replacing those shot and poisoned. Despite the concerted effort, and success, of the Alberta government to make a deep pile of wolf carcasses, it remains unclear if there were actually fewer predation events on caribou.

It is not clear that the cull reduced the decline of caribou. These authors adopted a before-after-control-impact (BACI) study design to assess the effect of wolf culling on lambda. They monitored lambda of the LS herd before and after wolf culling,

and during the same period of time in a nearby ‘control’ herd (the Redrock-Prairie Creek herd, RPC). The logic of this BACI design is that the control herd provides a measure of ‘normal’ population change in the absence of wolf culling. Thus, if culling wolves is restoring caribou, we would expect little change in the population trajectory of the RPC ‘control’ herd and a noticeable change in growth of the LS herd coinciding with the start of the wolf cull in 2005. However, the data in the Hervieux et al. study show that lambda was increasing in the LS herd prior to wolf culling, with the largest lambda (1.1) occurring the year *before* the cull started. In the control area, where wolf predation on caribou allegedly continued unabated, there was a gradual deceleration in lambda commencing with the start of the cull. While it *may* be true that killing wolves contributed towards the improvement in caribou lambda, it is true that caribou lambda was already trending towards values above 1 prior to the cull and that lambda improved in the absence of wolf culling for the control herd.

The ethical basis for this study has been questioned. Brook, Cattet, Darimont, Paquet, and Proulx, in a scathing commentary on the Hervieux study, attacked the ethics of shooting wolves from helicopters and using strychnine baits from the animal welfare perspective – Alberta’s emergency measures to try to prevent caribou extirpation. Aerial shooting doesn’t necessarily produce a quick, humane death. Strychnine does not meet the Canadian Council on Animal Care (CCAC) criteria for acceptable methods of humanely killing animals. To Brook and colleagues, these methods undermined the ethical basis of the study itself. “Based on an apparent lack of compliance with CCAC’s guidelines,” they argued, “we believe that this controversial study should never have taken place and should not have been published by the Canadian Journal of Zoology.” Hervieux et al. responded, in part, by stating that ethics approval from an institutional animal care committee (ACC)

wasn’t needed since the cull methods they studied were part of the Government of Alberta’s existing management plan. The central, ethical argument by supporters of the wolf cull is that we have a responsibility to prevent the extinction of Alberta’s woodland caribou herds, even if that means killing wolves. Perhaps such an argument would receive wider acceptance in the conservation community if stronger evidence were presented that the wolf cull stemmed the decline of caribou.

Resolving uncertainty in management

Wolves and caribou exist in a complex food web alongside other predators, herbivores, and plants. The landscape supporting this food web is changing from both natural and human-causes, and there is a pervasive decline in woodland caribou occurring across Canada. Identifying the cause of this decline will require rigorous testing and exploration of hypotheses that may explain what factors contribute towards the trend in the caribou population. Testing these hypotheses will likely require an adaptive management framework that uses the results of well-designed field studies that measure the efficacy of current management actions to inform future action. Critical to this framework is weighing risks and benefits of management actions. After six years, it is not clear that wolf culling achieved its desired management goal. In fact, risk to caribou may have actually increased. It is past time that we adopt a more creative view of how we can coexist with caribou and wolves in an industrialized landscape. 🐾

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West Central Alberta Caribou: Range Plan Slowdowns, Yet Solutions Within Reach

By Carolyn Campbell, AWA Conservation Specialist



While Alberta delays completing caribou range plans, AWA has helped postpone significant new energy leasing in an endangered mountain caribou range. An auction planned for March 12 did not proceed. This auction would have leased 21,000 hectares (212 square kilometres) in a relatively undisturbed area of the Redrock-Prairie Creek mountain caribou range in the Kakwa region of west central Alberta. Under Alberta's current ineffective surface disturbance guidelines, lease sales promote more seismic lines, more well sites, and more roads by new leaseholders. These sales make the dire survival chances for caribou even worse.

On March 5, AWA publicly called on the Alberta government to defer lease sales until effective caribou range plans are in place. The next day the government postponed those particular Redrock-Prairie Creek sales. An Alberta Energy spokesperson stated: "That gives us a little more time to take a look at the issue and do our due diligence ... because Albertans are very aware of some of the challenges concerning caribou, and government shares that concern." AWA was quick to praise this decision, while adding that much more action is needed.

Habitat disturbance continues to increase in Alberta caribou ranges. This advance is ongoing three years after the federal caribou recovery strategy gave provinces three to five years to develop range plans to steadily reduce disturbance. It's no mystery why Alberta's caribou are in trouble. Our mountain and boreal woodland caribou

populations are declining due to intensive forestry clearcuts and energy industry surface disturbance. This industrialization stimulates deer and moose numbers and, therefore, wolf predation. Caribou are collateral damage in this dynamic; wolves prey on too many caribou – far more than what healthy caribou populations need. As of early April, new energy leasing continues in all but two caribou ranges on Alberta public lands. Incoherently, leases are still offered in the Redrock-Prairie Creek range outside of the deferred parcel and in the adjacent Narraway range.

In March, AWA highlighted an innovative 2012 plan proposed by the Alberta Conservation Association (ACA) for the Redrock-Prairie Creek-Narraway ranges. The ACA plan is hospitable to energy development but...with strong rules to reduce surface disturbance dramatically in order to promote caribou recovery. Underground coal mining would be permitted; further surface disturbance by coal mining would be prohibited. It also proposes continued long-term timber harvest deferral, with compensation for the affected leaseholder. This is a great example of more responsible caribou range management that the Alberta government can and should choose. That plan did not receive its due in 2012; now is a prime opportunity for decision makers to take a serious look at it.

Meanwhile, the Alberta government's own multi-stakeholder caribou range plan process is, at best, dormant. The west central Little Smoky and A La Pêche caribou ranges, to the southeast of Redrock-Prairie Creek, are the first Alberta ranges chosen for range

plan development under the federal caribou recovery strategy. A multi-stakeholder Advisory Group, including AWA and other ENGO delegates, aboriginal groups, industry, and municipalities was launched with great promise in August 2013. The advisory group was co-led by Assistant Deputy Ministers from Alberta's Environment and Sustainable Resource Development (ESRD) and Energy departments and set early 2014 as the target date for submitting completed range plans. We all know what year it is now. AWA saw great collaborative potential in the multi-stakeholder group. This opportunity to transparently model scenarios to optimize habitat-focused range management was squandered. Its last meeting was December 2014 and there are no meetings on the horizon. While the Alberta government continues to develop these range plans it does so without including environmental groups. We hope Ministers Phillips



Excerpt of Alberta Woodland Caribou Range map, showing west central range areas with diagonal lines. Protected areas, shown in green and grey, overlap with some caribou range summer habitat but do not include important lower-elevation foothills winter habitat on Alberta public lands. MAP CREDIT: GOVERNMENT OF ALBERTA, 2013.

and McCuaig-Boyd will see the folly in this approach.

Solutions are within reach. A large forest harvest deceleration is coming soon in west central forestry tenure areas because of the mountain pine beetle surge cuts. While caribou still hang on, the deceleration is needed now. Ending logging in caribou ranges should be accompanied by regional sharing of logging quotas outside of these ranges in order to more evenly distribute economic impacts. AWA would prefer industry-free areas for caribou while habitat recovers, however, some energy industry activity might be compatible with caribou recovery. But the content of that activity must change. More flexible tenure terms and much stricter surface disturbance limits would motivate lease pooling, infrastructure sharing, and longer distance directional drilling. These changes to the way business is done currently in these ranges would help to prevent pipeline, seismic line, and road disturbance from growing while spurring restoration actions.

The Little Smoky and A La Peche ranges are the site of Alberta ESRD's wolf kill program, now finishing its 10th winter season. The aerial gunning and strychnine program has killed 1,000 wolves. At best, this shoot and poison program has stabilized the two

caribou populations at about 200 animals. AWA has repeatedly stated that it is highly unethical to kill 100 healthy wolves per year while promoting land uses that stimulate deer, moose, and wolf populations. Under these conditions, wolf populations quickly rebound, leaving caribou with worse long-term prospects in ever more degraded habitat. AWA also has opposed the strychnine use, raising concerns about bykill to other species from poison baits checked only every eight days on average. The gunning program also extends into the Willmore Wilderness protected area. The Willmore's wildlife too pay an unacceptable price for the irresponsible land use practices occurring outside its boundaries.

By now, even the province's adjusted 'early 2015' target for Alberta's first two range plans will not be met. This is a big concern for at least two reasons. First, caribou are in a precarious, dire situation and we need to start now on the decades long job of improving their forest habitat. Second, it will be a complex task to create range plans for Alberta's other caribou populations across west central, northwest and northeast Alberta. The year 2017, just two years away, is the federal deadline for completed range plans outlining how habitat will be managed to achieve at least a 65 percent undis-

turbed level. Under federal *Species at Risk Act* (SARA) provisions, the Canadian government will assess whether there is effective protection of critical habitat in a range plan. It would likely harm the social license of Alberta's energy and forestry industries if the range plans fail this test. Alberta needs to finish these first two range plans and start on the rest.

Is caribou recovery worth the effort? In AWA's opinion, the answer is an unequivocal "yes." Scientists have stated that recovery of woodland caribou is technically and biologically possible. Woodland caribou are marvellously adapted alpine-foothills and boreal mammals. Alberta caribou have a right to recover and thrive in our prosperous province and are important lynchpins for the connectivity of national populations. Our caribou are important indicators of the health and intactness of the older forests and peat wetland complexes in which they reside. If we ensure that caribou have a future in Alberta, many other old growth and wetlands-reliant species will benefit. In west central Alberta, the relatively high, wet foothills forests will provide important 'refuge' areas from climate change impacts. There is no better place to start with strong, habitat-centred caribou range plans. ▲



Alberta's woodland caribou are important indicators of the health and intactness of the older forests and peat wetland complexes in which they reside. Their recovery is possible, according to scientists, with habitat-focused range plans. PHOTO: © D. CRAIG

The Curious Case of the Ronald Lake Bison:

When is wildlife not wildlife?

By Sean Nichols, AWA Conservation Specialist



It may sound like a brain teaser or a riddle: “*When is wildlife not wildlife?*”

The Government of Alberta’s answer seems to be “when they are diseased.”

We know roughly one third of the wood bison found in Alberta’s Wood Buffalo National Park are infected with brucellosis or bovine tuberculosis, diseases which have spread to some wood bison herds outside the park. This has led to concerns about the potential for transmission and the effect of these diseases on the survivability of the species, as well as on domestic livestock in Alberta. As a result, “bison east of Highway 35 are assumed diseased and have been classified as non-wildlife” under the Alberta *Wildlife Act*.

This classification means that outside of park boundaries, the bison receive no protection from poaching or other forms of hunting at any time of year. Other than a public health advisory issued in 1992 “urging anyone handling, processing, and consuming potentially diseased bison to take precautions” it is open season on these animals.

So it was no surprise earlier this year when members of the Athabasca Chipewyan First Nation (ACFN) discovered evidence of such poaching: the carcass of a bison lying in the snow, with its head removed.

This is where things become slightly murky, because the bison was the member of a herd that is in fact disease-free.

The poached bison was a member of the Ronald Lake herd, whose range is slightly south and east of Wood Buffalo National

Park and overlaps the ACFN homelands. In March 2013, a flyby counted 186 members of this herd, and both the ACFN and conservationists are concerned about potential reductions to that number.

In 2011, having yet to confirm a case of either brucellosis or tuberculosis among members of the Ronald Lake herd, the then-ministry of Alberta Environment and Sustainable Resource Development (ESRD) embarked on a disease-sampling program to determine rates of infection in the herd.

From 2010 through 2014, samples from 73 individuals in the Ronald Lake herd were tested for disease and not a single case was identified. Based on these tests the government, in 2013, rejected the assumption that disease prevalence in the herd was similar to that in the herds found in Wood Buffalo National Park. Instead “ESRD began testing the alternative hypothesis that the Ronald Lake Bison are not diseased.”

Following the 2014 sampling that didn’t uncover a single case of disease, ESRD then expressed that it was 95 percent confident that the disease either did not exist in the herd or had infected less than five percent of the herd. In their September 2014 progress report on wood bison disease risk management, the government wrote: “We will therefore manage [the Ronald Lake herd] as disease free until we receive other information that indicates the herd is infected.”

AWA took this statement to mean the herd would be re-classified under the *Wildlife Act* as wildlife and would be legal-

ly protected from hunting and poaching. The bison carcass discovered by ACFN members was the result of illegal poaching and should be investigated as such.

This would mean the Ronald Lake herd would enjoy the same legal protection that is extended to the Hay-Zama herd (west of highway 35). Protecting the Hay-Zama herd was cited as a reason for classifying the diseased herds as non-wildlife in the first place.

Yet when AWA put in a call to ESRD to confirm this understanding, we were informed that any decisions were still pending consultation and were directed to their media spokesperson. ACFN also reported that ESRD was unwilling to investigate the poaching.

So while the answer to the riddle may be straightforward the Ronald Lake bison herd are having a hard time getting government to recognize them as wildlife.

This province isn’t the only government reluctant to fully protect bison. Ottawa is reluctant too. In June 2004, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) recommended that the plains bison, occurring further south in the province, should be added to the list of species protected under the federal *Species at Risk Act* (SARA). Yet in August 2005, the federal Minister of the Environment rejected that recommendation and left plains bison off the list for primarily economic reasons (see the story by Nigel Douglas in the June/July 2014 issue of WLA).

This year, we have another chance. Plains bison are again up for consideration for inclusion on the SARA listing. AWA strongly

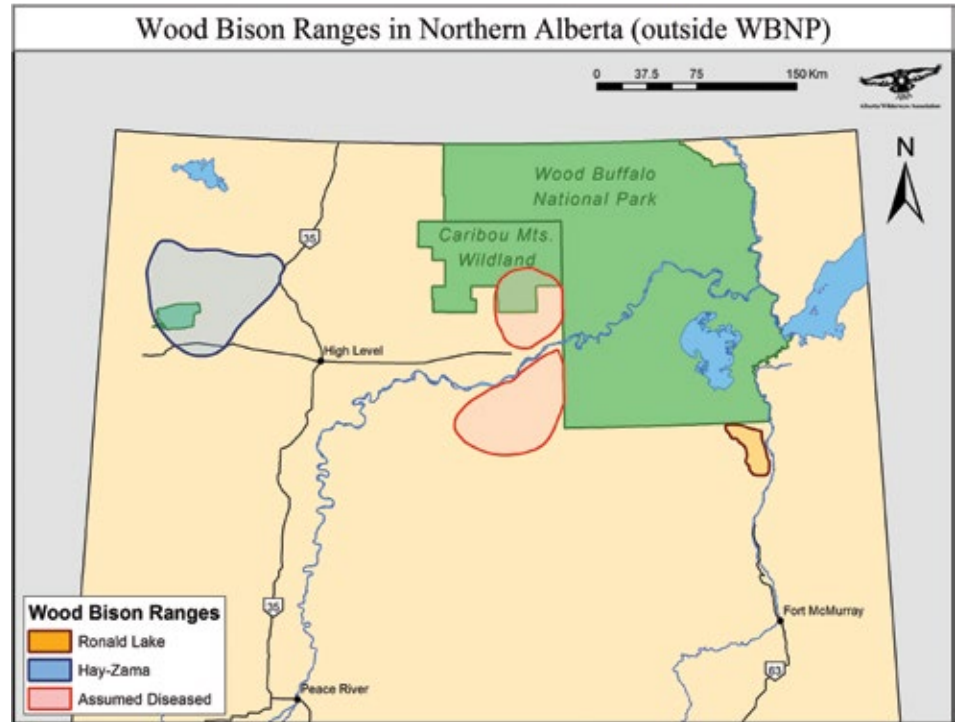
supports this listing.

In the same move, however, the federal government is inexplicably proposing a *downgrade* of the wood bison (which have been listed under SARA since June 2003) from “threatened” to “special concern.” The proposal cites increases in wood bison populations, disregarding the fact that many of those bison are diseased, and that the few non-diseased herds, such as the Ronald Lake and Hay-Zama herds, are not very large. Indeed the species summary for wood bison published by COSEWIC explicitly says: “Further increases to the population size or the addition of new wild subpopulations is not likely, as recovery is constrained by fragmented or unsuitable habitat, road mortality, disease management associated with livestock and commercial bison operations, and disease outbreaks.”

The proposal to downgrade wood bison under SARA also misleadingly references the species being classed as wildlife under Alberta’s *Wildlife Act*, again disregarding the fact that this is only true for the Hay-Zama herd.

Just as we support a SARA listing for the plains bison, AWA strongly opposes the proposed downgrade of the wood bison. We equally strongly support the re-classi-

fication of the Ronald Lake herd as wildlife. It’s hard for us to look a bison in the eye and not see it as wildlife. 🐾



Map of wood bison approximate ranges in northern Alberta. Map shows ranges for herds managed by the provincial government (i.e.: outside Wood Buffalo National Park)

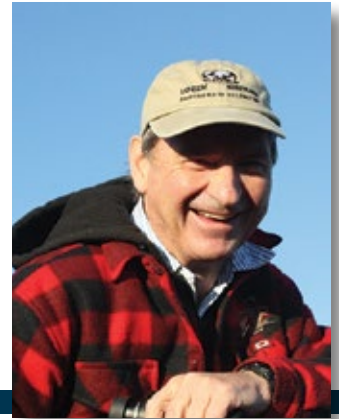
Featured Artist Bonnie Curran



Winter Afternoon,
acrylic,
26" x 30"
PHOTO: © B. CURRAN

On the Proposed Introduction of Bison to Banff National Park: One Ecologist's Skepticism

By Lu Carbyn, PhD



In 2010 Parks Canada recommended that bison be re-introduced to Banff National Park. Based on an extensive public review, Parks Canada concluded there was strong support for the program and some opposition.

After 48 years in the vocation of wildlife research and conservation, I have concluded that such a program certainly would have a lot of initial glamor appeal. But I believe that, more importantly, it would produce a number of disadvantages over time. Most of my insights have been gained by studying predator-prey systems, including extensive studies on wolf predation on bison in Wood Buffalo National Park. From this perspective, I think it is almost certain that reintroducing bison to the Park could, and likely will, create more problems than it would solve.

I worry that reintroducing bison to the Park will foster a game farm mentality that could destroy some of Banff National Park's remaining wilderness qualities. I want to avoid being able to tell Parks Canada "I told you so" ten years from now. So I hope management will reassess this recommendation and not proceed. No action will increase Parks Canada's abilities to better protect a unique wilderness ecosystem that has all the qualities needed to remain a jewel in the Canadian Parks system. Let me explain what's behind my skepticism.

Rationale – biological

Bison were an important feature in the past but that was when herds were free to seasonally roam from wintering to sum-

mer ranges. There were no constraints placed on their movements by fences. Fencing them in year-round will create an artificial situation and, therefore, renders the species akin to that of an "EXOTIC," not the "RE-CREATION" of the biodiversity as it existed prior to the coming of the Europeans to the continent. Indigenous peoples hunted these pristine bison herds. This is obviously an option no longer possible to "re-create." It is also likely that bison numbers never reached the same densities in the mountain valleys as they did on the plains. Historical records show that explorers reported seeing fewer animals as they traveled from the prairies to the Rocky Mountains. Furthermore, under pristine conditions, bison could stay in the plains if deep snow conditions prevailed in the mountains. They could also simply leave if conditions warranted. These are all very important factors absent in the situation that will exist, if bison are held captive in their proposed enclave.

Therefore, in my view, introducing this herbivore back into the system will be similar to acquiring an "invasive species" as opposed to re-introducing "a native species." What "was" simply is not what "will be" and the herbivore will simply not provide the same "ecosystem services" in the modern ecosystem, as opposed to how that relationship existed in the past. Those who claim this will not matter may simply be using the iconic value of the species, out of context with biological and historical realities, to justify the means to a questionable end.

It is also a numbers game. Bison popula-

tions will double in size about every five years. Initial introduction of 40 animals will, therefore, result in the production of over 80,000 animals or so over a 50-year period. Wolf predation will likely impact numbers to some degree, and the same may be expected from infrequent predation by bears in spring on new born calves. However, studies have shown that bison are a lesser prey item of wolves in multi-prey systems. Human intervention will likely be required to manipulate herds over time, as is the case in Elk Island National Park. It is a basic tenet of management of wilderness areas to reduce human interference to a bare minimum, and wherever possible, to exclude it altogether.

Some have said that introducing bison will manage for future climate change. I question that rationale. Climate change will occur and systems should change in parallel to conform to natural ecological processes. Processes need to evolve without human intervention. That is simply what the philosophy of park management is all about. There are, of course, exceptions, such as when it applies to the management of endangered species or endangered plant communities. The use of controlled burns is an example of a management action designed to mimic natural processes that have been compromised by human activities. Creating game farm conditions, to cater to aesthetic appeals by introducing a charismatic herbivore, hardly qualifies as good ecosystem management -- my opinion.

Human interventions to manage bison



Bison in Wood Buffalo National Park. PHOTO: © L. CARBYN

will take the form of road constructions (upgrading of existing fire trails in some cases), construction of corrals, holding facilities, and the introduction of potential exotic vegetation (through the introduction of hay to feed captive animals.) Management of reintroduced bison herds also means using helicopters to round up animals and, potentially, to haze bison to keep them in designated areas.

The application of fences also restricts movements of other wildlife species, further providing an intrusion into the system. Certainly, fencing is widely used worldwide to manage nature reserves, and there are definitely both costs and benefits to fencing; however, the use of fences should always be viewed as a last resort. It should also only be used to solve problems and it should never be used to create problems. Fences are used to solve management problems related to disease transmission or preventing property damage. Fences are not now required in the

Banff National Park backcountry ecosystems (except for managing highways and railroads). The east side of Banff, with its mountains and foothills, are unimpaired wilderness areas – wild, open landscapes – that freely allow the trans-boundary movements of wildlife. Such movements are to the mutual benefit of both the province and the national park. Wolves can pass through these fences but there are other essential implications that I have not seen addressed in the proposal. .

I have not seen any evidence that the program has taken into consideration the potential deleterious impact of fences to “natural” predator-prey interactions. Wolves can, given the right circumstances, use fences to aid in cornering their prey. This creates another artificial situation that is inconsistent with the “pristine conditions” that this program reportedly is trying to recreate. Wolves are also known to chase bison herds and that, on occasion, can result in long distance displacements of indi-

vidual herds. I have recorded (published in a peer reviewed paper) one such displacement in Wood Buffalo National Park. The chase, and kill, lasted for a short distance, but the herd continued moving for another 80 kilometres before settling in a new location. How will that impact management? The plan calls for containment of animals in predetermined areas, adding further complexity to parks management, which is already complicated because of declining sources of funding.

Conservation – administrative

One of the great environmental ills of the beginning of the twenty-first century has been referred to as Nature Deficit Disorder. Mankind is simply losing touch with nature; people are caught up in the digital world, and are therefore deprived of many sensory perceptions that nature has to offer. This program only adds to that problem. How you might ask?

Bison can be dangerous, particularly during the rut. Therefore, people will be encouraged to enjoy nature from their cars (if ever they move into such areas) instead of hiking in back country trails, where rutting bulls could be encountered during the breeding season. That fear will likely also extend to other times of the year. Certainly safety aspects have been built into the plans, and obviously considerable thought has been put into the overall execution of management implications. That does not mean, however, that parks administrators are encouraging people to get in touch with the back country—it simply adds another fear factor to going out in nature. I think this is a poor way to manage our wilderness areas.

Plans are to increase the educational component of the program to include

wildlife cameras, as well as interpretive aspects such as stories on web sites, mass media, and remote viewing web cams. While these are positive components, they should not come at the expense of healthy, first-hand experiences with the natural world, nor should they come at the same time we are losing some of the pristine wilderness qualities within Banff National Park.

Vivian Pharis, a highly respected conservationist, who has devoted much of her life to wilderness conservation in Alberta, was alarmed when she first heard of the bison re-introduction proposal. She gave a number of very specific examples on how parks have cut funding to essential programs and concluded “the last thing that BNP needs is to take on is a hugely costly bison

program.” Maybe it is simply a generational thing—but I wholeheartedly agree with her.

I see here a proposal to introduce an “invasive species,” held captive in a glorified (albeit scenic) game park (kind of a Jurassic Park), absorbing horrific costs in doing so (monies that should be directed to managing the real needs of ecosystems) in Canada’s premier national park. ▲

Lu Carbyn is an Emeritus Research Scientist with the federal Department of the Environment and an Adjunct Professor in the Dept. of Renewable Resources at the University of Alberta.



Wolves waiting for an opening, Wood Buffalo National Park. PHOTO: © L. CARBYN

Conservation Easement on Three Sisters Corridor: A Valuable Legacy

By Heather MacFadyen, PhD



Alberta and Three Sisters Mountain Resort (TSMV) have signed a conservation easement agreement on the Stewart Creek section of the Three Sisters Primary Along Valley Wildlife corridor and a portion of the Stewart Creek Across Valley Corridor. This ends a 10-year hiatus since 2005 when this agreement went into limbo, after being agreed to by TSMV, the Province, and the Town of Canmore.

The Three Sisters Wildlife Corridor is a legal requirement of the 1992 Natural Resources Conservation Board (NRCB) approval for Three Sisters Golf Resorts Inc. to develop in Canmore's Bow Valley after their application to build a resort in the Wind Valley was denied.

Until now there have been two conservation easements in place on the Three Sisters Primary Corridor in the Three Sisters Resort Area, with one easement on the core Along Valley Corridor and the Across Valley Corridor and corridor buffers (2003), and another on the 35-metre corridor buffer to the Along Valley Corridor to "*widen the effective width of the wildlife corridor*" (2007).

The addition of this third conservation easement in the Stewart Creek Area is a long awaited conservation legacy. It marks a significant positive step toward protecting the entire Three Sisters Primary Along Valley Wildlife Corridor on the basis of the "*more recent scientific thought*" expected by the NRCB.

Mayor John Borrowman and Canmore Town Council, and Alberta Environmental and Sustainable Resource Development (AESRD) are to be congratulated for responding to public concern and finalizing this conservation easement.

The Stewart Creek section of the Along Valley Wildlife Corridor

The 'Stewart Creek' Corridor section comprises approximately 2.3 kilometres of the Three Sisters Primary Multi-Species Along Valley Wildlife Corridor.

To the northwest lies the Resort Area section of the Along Valley Corridor and to the southeast is the corridor "disconnect" with the Wind Valley section of the Primary Corridor still proposed for protection by AESRD.

Unfortunately the Municipal District of Bighorn approved the Stewart Creek Golf Course in 1991 just before the proclamation of the NRCB and its 1992 Decision on Three Sisters Resorts. This approval came despite the fact almost two-thirds of the golf course is comprised of wildlife corridors.

Over the years, with increasing pressure for development adjacent to the wildlife corridor, as well as for year-round recreation in the golf course and corridor, it became imperative to provide permanent protection of this primary wildlife corridor. It connects Wind Valley to the Bow and Spray Valleys and Banff National Park so that it remains fully functional for wildlife movement in the late fall, winter, and early spring.



Looking eastward to Stewart Creek and Wind Valley wildlife corridor sections. PHOTO: © H. MACFADYEN

The Stewart Creek Conservation Easement Agreement

The Stewart Creek Conservation Easement protects a total area of 95.94 hectares of land. Over 60 percent of the land is comprised of wildlife corridors, with approximately 58 percent lying in the Along Valley Wildlife Corridor and approximately two percent lying in the Stewart Creek Across Valley Wildlife Corridor.

About one-third of the CE (32.9 hectares) is made up of Crown/public lands that until now have been leased to the golf course. They lie almost entirely in the Along Valley Wildlife Corridor. TSMV will receive title to these lands in exchange for permanent protecting the corridors and adjacent lands within the easement.

The remaining two-thirds of the CE (63 hectares) are owned by TSMV. In this area

over 44 percent of the golf course lies in either the Across or Along Valley Wildlife Corridor.

According to Kyle Fawcett, former Minister of ESRD, *“the easement restricts development and activity to (existing) golf-related activities – no other development or recreational activity will be permitted”*.

Final protection of the Three Sisters Corridor

In addition to championing the 2003 and 2007 conservation easements in the TSMV Resort Area, the Bow Corridor Organization for Responsible Development (BowCORD) has worked, from 2004 to 2015, for the permanent protection of the Stewart Creek section of the Along Valley Corridor under a Provincial Conservation Easement Agreement, with support from AWA and others.

We hope signing this 2015 CE in the Stewart Creek area will herald a final agreement with the Province, where TSMV meets their legal obligations under the NRCB ruling to protect the remaining south east section of the Three Sisters Along Valley Wildlife Corridor in the Smith Creek Area with functional corridors that are consistent with ESRD recommendations. This will ensure the safe movement and survival of wildlife through the Bow Valley and connecting regions of Kananaskis Country, the Wind and Spray Valleys, and Banff National Park. ▲

Heather MacFadyen is the Chair of the Bow Corridor Organization for Responsible Development and a recipient of the Queen Elizabeth Diamond Jubilee Medal for conservation of wildlife corridors and habitat in Alberta.

Featured Artist Bonnie Curran



Stepping Stones, acrylic, 12 x 16 inches PHOTO: © B. CURRAN

Focus:

Alberta's Species-at-Risk Yellow-bellied Racer

By Nigel Douglas



When is an endangered species not an endangered species? A snake called the yellow-bellied racer is so rare in Alberta – you could count the number of confirmed records on the fingers of two hands – that in the past it has fallen between the cracks of provincial endangered species protection. A search for the yellow-bellied racer on the website for Alberta Environment and Sustainable Resource Development (ESRD) did not even acknowledge that the species occurs in Alberta. It currently has no official status – endangered, threatened or secure for example – in the province.

AWA hopes the 2014 discoveries of hibernacula – overwintering grounds – for yellow-bellied racers near Onefour in southeastern Alberta will open a new and more optimistic chapter in the recovery of this fascinating reptile. In 2013, AWA reacted swiftly to the news that the federal government was proposing to close the Onefour Research Station in southeastern Alberta (a small proportion of the research station is on federal land, but most of it sits on provincial land leased to the federal government). AWA called at the time for full legislated protection for the Onefour Research Station and the recent discoveries can only strengthen these calls.

Eastern yellow-bellied racers are one of 11 sub-species of the Eastern racer, *Coluber constrictor*, all of which are endemic to (occurring only in) North America (the closely-related western yellow-bellied racer occurs in British Columbia). They are thin-bodied and active snakes, growing up to 1.5 metres in length. The yellow belly is only found in adults. They are an olive-green colour on the upper part of their bodies with, as the name suggests, a noticeable yellow belly. Juveniles are quite different, being pale tan or cream, with brownish blotches. As the name suggests also, racers are fast-moving snakes and, as researchers know to their cost, if cornered they are quite prepared to bite and to fight back.

Yellow-bellied racers eat small rodents, lizards and amphibians as well as insects such as crickets and grasshoppers. Given the chance they will even eat juvenile snakes of other species. Despite the scientific name *constrictor*, yellow-bellied racers are not true constrictors; they are more likely to hold prey in their mouths and use one or two coils of the body to hold it in place until they can swallow it whole. Eastern yellow-bellied racers inhabit mixed-grass prairie grassland. During the winter, they hibernate in traditional hibernacula; south-facing slopes are preferred, usually in rock piles and crevices, or in burrows belonging to mammals or other snakes.

According to COSEWIC in 2004 (the Committee on the Status of Endangered Wildlife in Canada), eastern yellow-bellied racers are widely, if sparsely, distribut-



Yellow-bellied Racer. PHOTO: © C. WALLIS

ed across northern North America “from Maine to southern British Columbia, south to the Florida Keys and northern Guatemala.” In Canada they are restricted to south central Saskatchewan and now southeastern Alberta. The 2010 Parks Canada report, *Recovery Strategy for the Eastern Yellow-bellied Racer* (*Coluber constrictor flaviventris*) in *Canada* lists just four confirmed and one probable record in Alberta between 1975 and 2010.

In an exciting development, in October 2014 Alberta government biologists surveying for reptiles on a ranch in southeastern Alberta found a yellow-bellied racer hibernaculum. Seven sightings of the species were eventually made over the next few weeks.

The 2010 recovery strategy notes that the primary threats to the species include “habitat loss due to human activities, small population size, road mortality, and human disturbance of hibernacula.” It also points out that there are a number of information gaps in what we know about the distribution and behaviour of racers. The strategy recognizes that the primary

threats to racers or their habitat can be effectively avoided or mitigated through:

- (1) the use of management and stewardship actions to protect habitat;
- (2) education, research and monitoring to support conservation and management decisions;
- (3) public outreach and awareness programs; and
- (4) cooperative approaches to agricultural, industrial and other anthropogenic development.”

There are, however, some serious shortcomings in the recovery strategy. Disappointingly, the population and distribution objective for eastern yellow-bellied racers is “to *maintain* the species’ distribution within Canada,” with apparently no intention to increase its range. Like any endangered species recovery strategy, recovery is dependent on the identification and protection of critical habitat. Critical habitat is defined in the strategy as “seven currently used hibernacula and the immediate adjacent areas within a 500 metre radius of those hibernacula.” All of the identified areas of critical habitat are

within Grasslands National Park and the AAFC Val Marie Community Pasture in southwestern Saskatchewan; it remains unclear if there are plans to designate critical habitat around the newly-identified hibernacula in southern Alberta. There certainly should be. The opportunity is clearly there for both federal and provincial governments to step up to the plate and ensure that habitat for these threatened reptiles – and indeed for 22 other federally-listed species at risk which are found at Onefour Research Station – is protected forever. 🐢

Quick Facts:

- Eastern yellow-bellied racer, *Coluber constrictor flaviventris*
- Federal status: Threatened (Saskatchewan)
- Provincial status: Not yet listed
- Length: up to 1.5 metres (60 inches)
- Surprising fact: Female yellow-bellied racers are slightly larger than males.



Featured Artist
Bonnie Curran

What Do You See?,
acrylic,
12" x 16"

PHOTO: © B. CURRAN

Conservation Corner:

The Amazing Flight, and Plight, of the Purple Martin

By Niki Wilson



There's something about purple martins that captures the imagination of wildlife lovers, making them one of the most loved neo-tropical migrants to breed in Alberta. They have the Tie-fighter-like deftness of a swallow and the social affability of a raven. The males are handsome – their purple-black-blue sheen flashing in the light.

Their appeal to humans is a good thing. The eastern population, of which Alberta martins are a part, relies heavily on the installation of purple martin houses to survive. Historically, purple martins nested in woodpecker holes and natural tree

cavities, but the loss of this habitat means they are reliant on bird lovers with carpentry skills.

Like other migrants that spend their winters in South America, purple martins are known to travel extraordinary distances over the course of a year. But it wasn't until recently, through the work of Dr. Kevin Fraser at the University of Manitoba, that it became apparent just how extraordinary the Alberta members of the eastern population of purple martins are.

Working out of the Ellis Bird Farm, a conservation area near Lacombe set aside

primarily for cavity nesting birds, Fraser affixed tiny geolocators to the backs of several martins that were in Alberta for breeding season. The locators use an electronic sensor to record light levels, which can be correlated to specific locations, providing Fraser with the birds' travel coordinates for a year.

The results were astounding. "I almost fell off my seat when we were tracking the first ones from Alberta," says Fraser. "Some of them go a little farther south than where the average martin winters, and they move around a lot, so the migration distances for the Alberta [birds] was astounding – it was not uncommon for some of those birds to migrate over 20,000 kilometres."

Of note, one of the martins, aptly named Amelia, traveled previously unheard of distances – over 21,000 km on her round trip journey between Brazil and Ellis Bird Farm. She crossed the Gulf of Mexico, spent almost a month in Belize, and then spent the remainder of the winter in three different roosting sites in the Amazon Basin.

Perhaps what's most impressive is the speed with which she returned. Amelia arrived back at Ellis 21 days after leaving Brazil, averaging 600 km a day. Some martins are even quicker, says Fraser. "It's amazing that when travelling 10,000 to 12,000 kilometres, one or two of them were getting back in two weeks."

Marco Polo, another purple martin tracked by Fraser, has been tagged twice, providing two years of data. Fraser says that these repeat customers allow him to



Kevin Fraser with one of the intrepid travelers from the Ellis Bird Farm. PHOTO: © K. BELL

see how consistent birds are from year to year, what kinds of environmental factors might change their patterns, how precisely they time their migration, and how their migration changes with age.

“Marco’s timing was really consistent, and that’s what we find with a lot of the southern birds we’ve been tracking. Timing is a lot more consistent than space,” says Fraser.

In fact, *where* Marco went varied greatly between year one and year two. He went to the central Amazon in year one, along a tributary to the Amazon and spent most of his winter there. Then he migrated north to Suriname. But in year two, he went all the way to Bolivia, then moved into two different places in the Amazon, and then came back to Alberta.

“There’s something driving those movements in the winter that we’re not quite clear on,” says Fraser. “It could be weather related, or if they are tracking food changes over the winter, that might affect where they are spatially.”

There’s good reason to find out. Purple martins are aerial insectivores (birds that feed on flying insects). This group of birds is experiencing the fastest decline in North America, according to Environment Canada’s *State Of Canada’s Birds* report. It cites a combination of contributors including reductions in insect numbers, habitat loss, pesticide use, and climate change.

“We know that martins are declining at a more rapid rate at northern latitudes than southern,” says Fraser, explaining that a current analysis of 40 years of breeding bird survey data will hopefully help his team understand population trends. He and his colleagues would like to see the purple martin federally assessed under COSEWIC.

In the meantime, Fraser wants to understand what can be done here in Alberta. This year, he and his team will try to figure out what the range size is for foraging purple martins while in the prairie provinces during the breeding season.

“I wouldn’t be surprised if they forage

for insects over agricultural fields,” Fraser suggests. “If you have lots of insecticides and insect suppression on nearby fields, that can really have an impact on the amount of food available to martins.”

With each piece of the puzzle in place, more opportunities emerge for collaborative conservation of purple martins, and other aerial insectivores. Given the mammoth effort this bird expends traversing

the continents every year, Fraser hopes Canada will play an important role in ensuring great explorers, like Marco and Amelia, fly safely into the future. 🐦

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



Amelia's 2012/13 Flight Plan MAP: © K. FRASER AND M. PEARMAN

Bless the Children...

Need a hug? Want to give someone a hug? If the time's not right for that at the moment... here's a great tonic to tide you over. It comes in the form of two young conservationists – Ryland Chisholm and Abigail Hadden. These young ladies each donated \$100 of the money they received for their birthdays to AWA to help us preserve and protect the wild spaces and animals they care deeply about.

We were lucky enough to get to know Ryland at AWA's kids camp last August. After her ninth birthday she stopped by Hillhurst Cottage to offer her gift to us – and to the natural world she cares deeply about. Her thoughtfulness and selflessness are inspiring, heartwarming. Ryland, thank you so very much!

And then there's Abigail. This six-year old is especially fond of caribou so her donation will be dedicated to AWA's work on protecting caribou and the habitat their survival depends on. Abigail, your generosity is appreciated so very much.



Abigail Hadden

Ryland Chisholm

Provincial Candidates at AWA Water Forum



By Chris Saunders, AWA Board Member

Preservation of water resources is a foundational issue and fundamentally affects human life as well as the ecosystem as a whole. In Alberta water should be a particularly sensitive issue because much of its source, the watersheds of the eastern slopes of the Rocky Mountains, have been under attack for many years as a result of government neglect and negligence. The damage has largely come from forestry, oil and gas operations, development in sensitive areas, and the widespread use of off-highway vehicles, all of which are within government control.

It was with this in mind that the AWA held an “all-candidates” forum on water in advance of the May 5, 2015 election. The panel comprised the following candidates: Evert Smith, Alberta Party; David

Reid, Green Party; David Swann, Liberal Party; Robyn Luff, New Democratic Party, and Leah Wamboldt, Wildrose Party. Strenuous efforts were made by AWA staff to ensure the governing Conservative Party was represented; personal invitations were sent to 18 Conservative candidates as well as calls made to the party head office. Amazingly, no candidate or party representative could be found who was prepared to talk about Conservative policy positions on water. The failure of the Conservatives to provide a speaker meant that the moderator from CBC Calgary was unable to appear because to do so would have contravened CBC policy. Nevertheless, without a representative from the then-governing party and with an amateur moderator, the forum went ahead.

There were a number of common factors in the policy statements by the candidates. All agreed water resources required management through real long-term planning. Several candidates, including Robyn Luff and David Reid, noted that this requires the creation of comprehensive baseline data and monitoring against that data before major decisions are made about land use that could affect water quality and quantity. David Swann noted that the Alberta government has, over the years, lost its technical capacity to do meaningful work in this area. He said the government is a “shriveled shell of what it used to be and should be.” Evert Smith, who has 32 years experience in the forestry departments within the Alberta government, emphasized the importance



Provincial election candidates at AWA's Water Forum. PHOTO: © R. REIMER

of good monitoring and commented that the government has not invested enough in the science and technology required. David Reid called for more widespread water metering and a different approach to pricing. Leah Wamboldt said there was a much greater need for polluters to be accountable and called for greater enforcement of the regulations and higher penalties for contravention.

On the question of headwaters preservation Robyn Luff said “the number one thing to do is to protect our headwaters.” She talked of the damage being done by logging on the Eastern Slopes. David Swann went further, saying in order to preserve the watershed Alberta should purchase the logging contracts that have been given to private logging companies by the Alberta government. He noted that the city of New York has spent very large sums of money to purchase its watershed lands and that this is seen by many

as enlightened policy to conserve a vital resource. David Reid noted that the companies provided with logging contracts have little incentive to keep the land in good condition; they have the right to log without ongoing obligations of ownership. Robyn Luff stated she would advocate for a logging moratorium.

The candidates were asked to outline positions on flooding and drought. Robyn Luff was sceptical about the cost and effect of engineering projects and said the best protection against flood is intact ecosystems, healthy riparian areas and buffer zones. David Swann said there should an examination of who controls water flow upstream of Calgary where there are 11 dams controlled by TransAlta. He noted that these dams contain a great deal of silt and considerable flood control capacity could be gained by dredging.

On industry’s responsibilities with respect to water usage there were calls for

more science to improve the understanding of the use of water by the oil and gas industry and for more regulation. There were also calls for greater transparency in the way irrigation districts manage Alberta’s water. David Swann said there have been 102 sales of water licenses in the last 5 years.

In summing up David Reid talked about the woolly mammoth in the room. We don’t have enough water to meet the needs of a growing population and the government does not have a plan. Other candidates built on this by saying the government needs to take on the role of protecting the public interest regarding water matters.

On election night Robyn Luff and David Swann were elected to the legislature. Albertans need to hold them accountable for the commitments they made to improve our management of water resources. 🌱

Featured Artist Bonnie Curran



Now On To The Ridge, acrylic, 12" x 16" PHOTO: © B. CURRAN

Updates

Alberta Peace River Dam Project Cancelled By TransAlta

Alberta's Peace River Valley received an early Valentine's Day present this year. On January 16, TransAlta Corporation withdrew its application to the Alberta Utilities Commission for a nine year extension of its Dunvegan Hydroelectric Project's approved construction deadline date. TransAlta cited substantial information requests from stakeholders, a potentially long and costly hearing process, and unfavourable project economics as reasons for its decision.

The 100 MW hydro project would have been built just upstream of Alberta's historic Dunvegan Bridge. It would have placed a spillway across the Peace River, raising its level by 6.6 metres and creating a headpond of 26 kilometres. TransAlta had sought to extend the project's construction date deadline from May 2014 to May 2023 without completing geotechnical, transportation and environmental studies that were supposed to fill information gaps as a condition of 2009 approvals. These approvals were granted to proponent Glacier Power Ltd., which has since been acquired by TransAlta. If project economics improve, TransAlta will have to re-apply for project approval with fully updated environmental impact studies.

AWA filed a Statement of Concern and information requests to TransAlta. We were concerned about TransAlta's reliance on an Environmental Impact Assessment written in October 2006, which had limited fish and plant survey data. We thought the ELA's key conclusions on fish populations and migration needed validation, as the Joint Review Panel itself had noted in 2009. For example, one fish species at the eastern edge of its distribution, prickly sculpin, has since been confirmed locally but was missing from Glacier's survey. Other important issues needed to be updated and assessed, including the need for the project, its greenhouse gas emis-

sions and flood resilience, impacts to other recently designated species-at-risk, and the cumulative environmental impacts on Alberta's Peace River Valley fish and wildlife from other approved and proposed projects.

Because of Alberta's restrictive 'directly and adversely affected' rules for standing in an industrial development application, AWA's concerns did not trigger a hearing. Fortunately, a local citizen's group, called Concerned Residents for Ongoing Service at Shaftesbury, did qualify for standing to trigger a hearing. The extension might well have been granted without their intervention. Hearings hold proponents accountable for important project impact studies. The crucial role played by 'genuine public interest' environmental groups such as AWA in development decisions, as illustrated by this project, should be recognized by reforming standing rules to allow their concerns to trigger a hearing.

The cancellation of the Dunvegan Project is great news for Alberta's Peace River Valley ecosystem. Important fish and wildlife populations would be harmed by another instream flow barrier and associated infrastructure, adding to BC dams' already considerable impacts. Alberta can transition to green energy without the significant damage to our vital river ecology that in-stream hydro brings.

- Carolyn Campbell

Prairie Conservation Forum

There are many threats facing native prairie and parkland ecosystems. Less than one percent of Alberta's grasslands is legislatively protected. Therefore the government essentially has delegated the responsibility to be good land stewards to private landowners and public leaseholders. In many cases this delegation has greatly benefited native grasslands with excellent stewardship over the generations. Yet land conversion, invasive species, overgrazing, oil and gas development, roads, and more continue to encroach

on the few remaining intact grasslands.

So what more is being done on public land? At times, it seems too daunting a task for one group or individual to pursue grassland conservation and restoration. But there are many stakeholder groups across southern Alberta that are concerned with the security of native prairie and parkland. These groups are using a common platform to share information, collaborate on projects, and promote conservation through education and stewardship. The common platform is the Prairie Conservation Forum (PCF). The PCF was established in 1989 by the provincial government in response to a Prairie Conservation Action Plan (PCAP) developed initially by the World Wildlife Fund. The first PCAP was a prairie-wide plan crossing several provincial borders. It was a five-year blueprint that focused on efforts to conserve and manage native prairie species, communities, and habitats. Since the first PCAP, the PCF has taken over the lead organizational role, solely within Alberta, on developing subsequent PCAPs.

The PCF has grown over the last three decades and now comprises over 50 member organizations. Its membership spans from government and industry to academia and environmental groups (including AWA). The latest PCAP expires at the end of 2015 so the PCF board of directors and members have begun developing the next five-year action plan. AWA participated in a PCF survey and facilitated workshop on November 13, 2014 to provide input on the direction and desired outcomes of the next PCAP (2016-2020). The three overarching goals from the last PCAP (2011-2015) were:

1. Maintain large native prairie and parkland landscapes
2. Conserve connecting corridors for biodiversity
3. Protect isolated habitats

The aim of the next PCAP is to build on these goals by planning more short and medium term activities that will offer measur-

able results. The idea is not to re-invent the wheel but to evaluate the progress of the last five years and decide what continues to be a priority and what can be added to the next plan. Priority areas that were discussed align critically with AWA grassland and parkland areas of concern. They include the Milk River Ridge, Wainwright, and Wild Horse Plains in the southeast corner of the province. The hope is to move forward in improving the ecological health of these areas by using information and research, stewardship, and education.

The PCF meetings are also an important way to get representatives from a wide spectrum of interests into the same room. Member updates are helpful to find out what different groups are doing and what projects are happening. Not every member has the same background but everyone is at the table for a common goal – native prairie and parkland conservation.

- *Brittany Verbeek*

Positive Developments in the Fight Against OHV Offenders

Life got a little bit riskier for off-highway vehicle (OHV) offenders along Alberta's Eastern Slopes this spring after a couple of developments on the enforcement front.

In a March ruling, a judge in Rocky Mountain House assessed two \$1,500 fines against OHV users joyriding in the Clearwater River. This is the highest fine ever levied for this charge in Alberta's history. As reported in Rocky Mountain House's *The Mountaineer* newspaper, the judge in the case expressed disappointment at "the lack of respect the OHV users in [Rocky Mountain House] have for the local environment and wildlife." It was encouraging to see the decision offer judicial recognition to the value of Alberta's headwaters regions and the damage irresponsible OHV use may cause. A tip of the hat as well should go to local RCMP officers for their diligence in recording and bringing charges against the joyriders.

In one case, the officers were responding to a telephone tip to the detachment by a member of the public who reportedly overheard

the offender claim "this is how we wash our quads" as he spun the tires along the river bottom. This kind of reporting clearly indicates that Albertans are getting increasingly fed up with the destruction of their headwaters.

At the same time, AWA doesn't believe our landscapes should have to rely on exceptional individuals (see my article "From Hummingbird to Hope" in this February's issue of *WLA*). Going after irresponsible OHV users should be part of the government's organizational culture, a routine part of the job.

So AWA again encouraged the provincial government and the RCMP to step up enforcement of environmental regulations on public lands. We supported the proposal to create an RCMP division tasked with that enforcement. The support from the judiciary, from the public and the individual RCMP officers was clearly in place – the government needed to be on board as well.

That support arrived shortly afterwards. In a second development, the Government of Alberta announced the establishment of 23 new environmental enforcement positions to patrol Alberta's Eastern Slopes and other backcountry areas.

The 23 new positions are being drawn from a combination of conservation officers and seasonal park rangers. Twenty-one of the officers will patrol the Eastern Slopes, operating out of offices in Pincher Creek, the Elbow River, and Rocky Mountain House. The remaining two enforcement officers will operate out of Fort McMurray. All of these new



Joyriders in the Clearwater River – later charged
PHOTO: © W. HOWSE

enforcement officers are anticipated to work in coordination with the RCMP and with Alberta Justice and Solicitor General.

The positions are being created as a pilot program that will run throughout the summer; at the end of the season they will be evaluated to determine whether or not to continue the program on a permanent basis.

Findings from AWA's 11-year ongoing recreational trail monitoring project in the Bighorn indicate that Alberta's growing population and affluence have resulted in ever-increasing numbers of OHV users in the backcountry areas of the Eastern Slopes. In addition to the users, such as those charged in March, that knowingly and willingly perform activities that damage riverbanks and threatened fish habitat, many of the new OHV users also exhibit a simple lack of awareness. We hope education can prevent damage done through ignorance, while strong penalties such as steep fines and vehicle confiscations are applied to users who deliberately abuse the landscape. As with every year since AWA began monitoring in 2004, the data collected in 2014 offered ample evidence of some OHV users riding during clearly-posted closure period, and off of designated trails.

Wider public awareness of harmful impacts, steep penalties for irresponsible OHV, and enforcement are needed to combat the environmental damage OHVs may cause. AWA strongly applauds the government for establishing this project and hopes to see it continued past the end of the summer.



Evidence of OHV use on trails in the Bighorn during annual closure period. PHOTO: © S. NICHOLS

Summer Events

Bus Tour: Porcupine Hills Monday June 22, 2015

Situated between the mountains and the prairies, these hills are unique with their mixture of Rocky Mountain, Parkland, and Grassland natural regions. Join Vivian Pharis to experience the beauty of a wide variety of wildflowers in bloom, framed by natural grasses and shrubs. En route we anticipate opportunities to learn more about wildlife and ecological features of this important region. Don't forget to bring your binoculars!

Difficulty rating: Easy – bus tour; some walking to view flowers and other points of interest

Cost: \$45 AWA members, \$50 non-members

Pre-registration required: (403) 283-2025

Online: www.GoWildAlberta.ca/tours

Hike: Cardinal Divide with Jim Lange Saturday July 11, 2015

The Cardinal Divide area is adjacent to the eastern side of Jasper National Park, southeast of the town of Hinton. The area spans the continental divide; one side drains to the Arctic Ocean and the other to the Hudson's Bay. Resource extraction in the Cardinal Divide area is jeopardizing a refugium that is home to incredible biological diversity.

Jim Lange will lead a hike through this contrasted area of stunning beauty and scarred landscapes and learn about the natural and human history of the area.

Difficulty rating: Moderate-to-difficult

Cost: \$20 AWA members, \$25 non-members

Pre-registration required: (403) 283-2025

Online: www.GoWildAlberta.ca/hikes

Backpack Trip: Bighorn Trip and Trail Monitoring (2) Friday August 14, 2015 – Sunday August 16, 2015

Join AWA on a multi-day volunteering / backpacking trip to the Bighorn Wildland and be a part of the trail monitoring work we are undertaking as part of our Bighorn Wildland Recreational Monitoring Project! The area we will be going to is near the Ram Falls Provincial Park in the Upper Clearwater / Ram PLUZ of the Bighorn Wildland.

This will be a 3 day / 2 night trip (depending on weather, on how fast we go, on how much monitoring work there is, etc.) and involve ~35km of mostly easy walking including many creek crossings; there are optional more challenging side hikes if people are up to it. It will involve a volunteer component that will include visual monitoring and recording, photographing, and measuring of conditions with timestamp / GPS, etc. Training is provided for all of the volunteer tasks.

Difficulty rating: Moderate (not steep but long)

Cost: \$50

Pre-registration required: (403) 283-2025

Online: www.GoWildAlberta.ca/hikes

Party: AWA's 50th Anniversary Celebration and Purchase of AWA's Hillhurst Cottage School Thursday June 25, 2015

Can you believe it? AWA turns 50 this year! Come help us celebrate this amazing milestone at AWA's Hillhurst Cottage School in Calgary as we purchase this historic century-old property. Between the anniversary and the building purchase, AWA has lots to celebrate, so we're throwing a party for all our members, supporters, friends and neighbours. The afternoon will include dignitaries, music, refreshments, building tours, and fun for all.

Location: 455 – 12 Street NW, Calgary

Time: 3:00 p.m. – 8:00 p.m.

Building virtual tour and walkthrough:

www.AlbertaWilderness.ca/contact-info

Backpack Trip: Bighorn Trip and Trail Monitoring (1) Tuesday July 14, 2015 – Friday July 17, 2015

Join AWA on a multi-day volunteering / backpacking trip to the Bighorn Wildland and be a part of the trail monitoring work we are undertaking as part of our Bighorn Wildland Recreational Monitoring Project! The area we will be going to is near the Ram Falls Provincial Park in the Upper Clearwater / Ram PLUZ of the Bighorn Wildland.

This will be a 4 day / 3 night trip (depending on weather, on how fast we go, on how much monitoring work there is, etc.) and involve ~35km of mostly easy walking including many creek crossings; there are optional more challenging side hikes if people are up to it. It will involve a volunteer component that will include visual monitoring and recording, photographing, and measuring of conditions with timestamp / GPS, etc. Training is provided for all of the volunteer tasks.

Difficulty rating: Moderate (not steep but long)

Cost: \$50

Pre-registration required: (403) 283-2025

Online: www.GoWildAlberta.ca/hikes

Hike: Hand Hills with Tim Schowalter Sunday July 26, 2015

Join Tim Schowalter on a wander about this knob and kettle landscape, one of the few remaining northern fescue intact grasslands in Alberta. Its unique plants and animals will make for a lovely day of observing and learning.

Difficulty rating: Moderate

Cost: \$20 AWA members, \$25 non-members

Pre-registration required: (403) 283-2025

Online: www.GoWildAlberta.ca/hikes

For a complete list of AWA hikes and tours go to: gowildalberta.ca/product-category/hikes-tours/



Alberta Wilderness Association

We're 50 years old and we're buying our home!

The Alberta Wilderness Association has been stewards of the Hillhurst Cottage School for almost 40 years and we have arranged with the City of Calgary to purchase the building.



And You're Invited
June 25th, 2015
3pm to 8pm at 455-12th St NW

To come for a walk through the Hillhurst Cottage School, peruse AWA's Roger Creasey Memorial Library, soak up the historic details and 1910 architecture of the cottage school, meet old friends and new and raise a cup of cheer for the achievements of AWA's 50 years of endeavour and conservation in Alberta.

Donations are most gratefully accepted in person or online at www.gowildalberta.ca

Return Undeliverable Canadian Addresses to:



Alberta Wilderness Association
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