

A WILDLANDS ADVOCATE



THE ALBERTA WILDERNESS ASSOCIATION JOURNAL

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Cover Photo "Western" (Calurus) Red-tailed hawk (*Buteo jamaicensis calurus*). Red-tailed hawks are common in Alberta in summer. Most people are familiar with "Red-tails" as they often perch on power poles, and are commonly seen soaring high while searching for prey on the ground. Their screeching call is a sound of summer. Gordon Petersen is a wildlife and outdoor photographer based in Beaver Mines, Alberta. He believes those of us with a passion for wild things need to fight to save what's left and we also need to encourage others to do the same. Gordon believes it can be difficult for people to care about what they don't know and love; photography can help to highlight the earth's natural wonders including its wildlife, and can inspire people to care and to act. "I hope my images will help motivate people to make a difference," says Gordon. More of his work can be seen at www.petersenphoto.com © Gordon Petersen

Editorial Note

I am excited to be guest editor of the Summer 2022 issue of AWA's Wild Lands Advocate. This issue takes a closer look at our relationship with nature and how we manage to coexist and adapt to our wild neighbours across Alberta. We invited writers and our own staff to tell some stories highlighting this relationship and some of the positive initiatives happening around our province. Gordon Petersen, an AWA Wilderness and Wildlife Defender award winner, tells us about his own close relationship to nature and why nature is something we should all cherish. We've also included space for our youngest wilderness defenders to share their story. Beginning in this issue, you will find a regular feature for a "Cub Reporter." The first edition features Abigail Hadden writing about urban wetlands and what she loves about them. I hope you enjoy these stories and that they make you think about your own relationship with nature.



Nathaniel Schmidt,
AWA Director.

ALBERTA WILDERNESS ASSOCIATION

"Defending Wild Alberta through Awareness and Action"

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

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Alberta Wilderness Association

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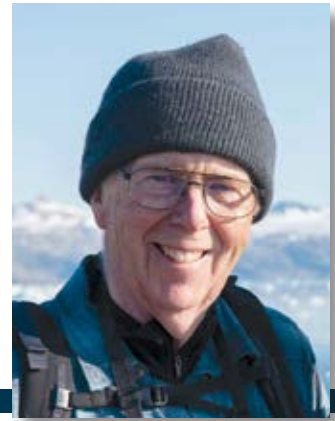
www.AlbertaWilderness.ca
awa@abwild.ca

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In Praise of Good Neighbours and Friends

By Gord Petersen, 2015 AWA Wilderness and Wildlife Defender



Apparently the last one didn't make it. All summer, my wife Cathy and I watched a pair of Swainson's hawks raise their brood. From little balls of not-particularly-attractive fuzz, to squabbling nest mates, to gangly adolescents exercising their wings in a space that suddenly seemed far too small, we watched as the three youngsters grew.

Dad was handsome enough with his silvery breast and dark hangman's hood, but mom was the real beauty. Significantly larger than dad, she was a uniform chocolate brown, and had a haughty countenance that seemed to say, "Just try me!" Even dad seemed a little intimidated.

As mid-August and the first hints of autumn rolled around, the now adult-sized chicks became restless, and we checked the nest more frequently. Would this be the day they fledged?

And then one day it happened – two of the three young Swainson's were gone. But the third sat on a high branch looking somewhat confused and forlorn. The parents circled and called, but the youngster wouldn't, or couldn't, make the leap. The next day he was still there, looking diminished and lonely, and we silently urged him on. The next day he was gone.

Over the next couple of weeks, we often saw two youngsters within a few hundred metres of the nest, the adults circling and watching, and occasionally delivering food to the still-dependent young. But try as we might, we could never locate all three youngsters at the same time. Before long, the birds were gone, headed for their wintering ground in Argentina. (Argentina! How can they find their way there and back? It's simply astonishing.)

I still feel bad for the youngster who didn't make it and wonder what happened. Was he unable to fly for some reason? Did his siblings outcompete him for food, making him too scrawny and weak to survive? Or, to anthropomorphise things, was he just lacking in nerve and confidence? We'll never know. One thing he did in his short life was to make an impression on us.

Swainson's hawks are part of our busy "neighbourhood". Near the Swainson's nest, we often see a pair of golden eagles whose nest is hidden somewhere northwest of "Eagle Hill". From there, it's around the corner to "Harrier Gap" where these elegant birds with their piercing stare patrol on silent, tipping wings. This is also a good place to check the distant hillside to see if the elk are about, perhaps resting in the warm afternoon sun. A little further along, a pair of bald eagles return each year to raise a family in their shambolic nest knitted into the dead branches of a grand old

cottonwood down by the river. This spring, we watched two grizzly bear cubs wrestle and tumble and play on the bank of that same river, while mom watched with the weary look of tired but proud parents everywhere.

Taking our leave of the eagles, we'll check in with our neighbours on "Bobolink Lane", move on to "Kestrel and Bluebird Way", and then continue to "Ferruginous Ridge". Even if we don't see a ferruginous hawk, there will almost certainly be a red-tailed hawk or two about, perhaps being harried by mischievous ravens. At the end of the road, an osprey pair keeps busy delivering fish to their voracious chick, seemingly unfazed by the traffic zipping by below, or by the cloud of flies buzzing around their heads. As always, Cathy frets about the great streamers of baler twine hanging below the nest ready to ensnare the unwary, or unlucky.

At the edge of an expanse of aspens and willows and hoping for lightning to strike in the same place twice, we'll stop to check the spot where we once locked eyes for a long minute with a cougar and her two blue-eyed kittens. Then it's on to see what the kingbirds are up to along "Kingbird Alley". On another back road, and next to a small pond, a pair of great horned owls raised three youngsters. The long-suffering adult assigned to parent duty would occasionally open a sleep-bleary eye to check on the rambunctious young crashing around in the brush below.

In a very real sense, the Swainson's hawks, the eagles, the cougars, the elk, the grizzly bears, the kingbirds, the owls, and all the rest, are our neighbours and friends. We feel a strong attachment and a sense of responsibility for them. They add life, colour, interest, and comradeship to what would otherwise just be scenery. What would be the point of living here without them?

Beyond that, and perhaps more importantly, they've always been here – this is their home. They belong here. Looking out for them is simply the right thing to do.

Gordon Petersen is an AWA Wilderness and Wildlife Defender award winner, an inspiring conservationist, an activist who motivated communities to care and stand up for the Castle Wilderness. As well as being an avid and highly-skilled wildlife photographer, Gordon is a Past President of the Castle Crown Wilderness Coalition and a director of the Rocky Mountain Eagle Research Foundation.

Becoming Better Neighbours – Coexistence with Wildlife and Wild Spaces

By Nathaniel Schmidt, AWA Director



The places humans live aren't often top of mind when we think about protecting wild spaces and wildlife. For centuries, our Western European culture has seen nature as somewhere "out there," separate from our own "civilised" habits. Nature was something to be controlled, harnessed, resisted and sometimes even feared. It was not to be welcomed into our communities. This mentality has been reflected in the European cultures of past centuries, where the natural world was a source of aesthetic beauty, but quickly disposed of when it got in the way of what we see as progress.

When European settlers started to flood into Western Canada, they brought this philosophy along with them. They came to "tame the land," which was seen as a wild, chaotic place with little inherent value. This new frontier existed solely as a source of opportunity for those staking their claim, and for the Canadian government, it was an opportunity to assert their sovereignty from coast to coast and provide a stable source of food for the growing urban centres in Eastern Canada.

The effects of this human-centric philosophy can be seen in what remains of Alberta's wilderness today. Aspen parkland and prairie grassland have largely disappeared to make way for urban and rural development across much of Alberta's "white areas."

This influenced the way we built our cities, towns, and rural communities, which are slowly becoming ecological deserts, worn down so that only the hardiest of native species survive amidst pockets of manicured lawns,

mazes of asphalt, and an endless sea of monocrops. It will come as no surprise to anyone to say that humans have left big environmental footprints. Catastrophic climate change and biodiversity collapse are now a daily reality, a result which can, in part, be traced back and attributed to this oppositional relationship with nature.

Luckily, things are starting to change. Cracks are slowly starting to form in the foundation of our adversarial relationship with nature as we grapple with these problems and reimagine the place of our human communities within our shared environment; changing our perspective from seeing the land around us as an obstacle that must be overcome and instead welcoming it back into our communities as a neighbour.

Coexistence, Adaptation, and Learning how to Live Without Resistance

There are many ways this shift is happening, but at its core are the ideas of coexistence and human adaptation to nature. Both represent a reversal from our historical tendency to force nature to coexist with us and adapt to our preferences.

A compelling description of this shift comes from a group of urban ecologists and biologists in their article *The Seven Lamps of Planning for Biodiversity in the City* which adopts the principle of "Lamps" from an essay on architecture and city planning. In their original form, these Lamps were intended as directions to achieve the standards of good architecture. Here, the authors repurpose this idea and create their

own directions to achieve the standards of good ecology. Their intention is to shift our focus on community building from human-centric to ecocentric. Basically, a Copernican Revolution for human development. They present seven principles or "Lamps" meant to encourage ecologically minded communities:

1. Protect and prioritise remaining ecological assets and habitats.
2. Create connectivity between biological populations and habitats.
3. Construct diverse and complex habitats to attract or retain biodiversity where needed.
4. Build ecological cycles that mimic natural flows of things like water and organic matter.
5. Encourage interactions within and between ecosystem elements.
6. Prioritise benevolent infrastructure to reduce negative impacts on biodiversity.
7. Realise the potential of novel ecosystems and ecological communities.

In a nutshell, applying these lamps welcomes the environment back into our human communities by embracing biodiversity instead of resisting it. Applied effectively, they prioritise coexistence with our environment and encourage adaptation to natural systems. Although the authors applied these Lamps in an urban context, they are universal to all types of human activity that has the potential to alter the environment.

In every region of Alberta, a person can find Indigenous groups, organisations,



Volunteers with the Piper Creek Restoration Agriculture Project hard at work restoring vegetation around the creek as part of their efforts to revitalise the area.
Photo © Rene Michalak

volunteers, and people in their own backyards putting principles like these into action. Each activity is unique and reflects the diversity of Alberta's ecosystems and the people who care about them. Many of these local and regional entities operate independently within their own communities but are collectively responsible for improving the ecological health of our province and the ecological awareness of all of us who call it home.

The active projects across Alberta embodying these principles are too numerous to name and would need an entire issue of the Advocate - or more - to showcase. However, a few examples show how valuable this way of living can be.

Take for instance the Piper Creek Restoration Agriculture Project, a

collaboration between nearly 20 community groups, environmental organisations, businesses, and government entities. This project has completely transformed an area of Piper Creek, just south of the Red Deer landfill and formerly lost to human activity, back to a healthy riparian ecosystem.

Piper Creek went beyond restoration, and its stated purpose was to "repair and improve the historical impacts on an important riparian and agricultural area in the Red Deer River watershed by regenerating and enhancing Red Deerians' understanding of, and relation with, the natural world."

This approach prioritises healthy ecosystems while recognising their important place within the surrounding human community. Emphasising the important role of Red Deerians ensures

Piper Creek becomes part of the fabric of the community and breaks down the barriers between humans and their environment. People are welcomed to experience and take part in this place, learn about what it has to offer, and form a connection with its health and survival. Investment in the creek becomes investment in the community.

Two other initiatives show another way Albertans are helping each other better understand our relationship with nature. The Edmonton Urban Coyote Project (EUCP) and Lethbridge Rattlesnake Mitigation Program (LRMP) are shifting the narrative on two species that have often been demonised while also giving them the space they need to survive in the midst of population centres. Instead of feeling fear or even hatred towards coyotes and rattlesnakes, these initiatives

encourage people to understand the personalities of both animals and learn how they can live with them instead of in opposition to them.

The EUCP encourages people to report sightings and avoid conflicts, while providing educational resources about coyotes. These strategies empower Edmontonians to take positive action, giving them the tools to avoid negative human-coyote interactions and appreciate their wild neighbours. The same is true of the LRMP, which is run through the City of Lethbridge and the Helen Schuler Nature Centre. Through education and mitigation, the program gives people a healthy respect for the 200-400 rattlesnakes that call Lethbridge home and helps them to avoid potentially dangerous interactions. The LRMP also has the unique distinction of employing its own rattlesnake consultant, Ryan Heavyhead, who comes to the rescue when the snakes find themselves somewhere they might not be welcome. The positive roles coyotes and rattlesnakes can play for nature and humans are also highlighted. For example, coyotes and rattlesnakes both help control rodent populations and therefore help control the spread of disease.

All three of these initiatives are maintaining an ecological asset by changing the way we think about it. In the process, they are reimagining the relationship between humans and our wild neighbours.

Changing our Minds

Coexisting with and adapting to our environment is key to mitigating the effects of climate change and biodiversity collapse. But it also has the potential to enrich the places we live and give them a meaningful identity through preserving our natural heritage. Projects like Piper Creek, EUCP, LRMP and myriad others in every corner of Alberta preserve our wild spaces and wildlife while changing people's minds about our place in the environment.

Here's a hypothetical scenario to explain. One day you're on a nature walk with a local naturalist learning

about invasive plant species in a river valley and helping to identify them. On the walk, you learn about the characteristics of black-capped chickadees, which are common in the valley, and also how healthy river valleys support them and other animals like American mink, porcupines and countless bird species.

The next day at home, you start paying attention to what's around you for the first time. You notice a group of chickadees trading calls outside your window when you see another bird. It's like a chickadee but not quite the same. You do some research and realise it's a red-breasted nuthatch. What is that? Is it native to your area? How can it survive in the middle of the small city where you live?

You keep reading and learn they're native to a large part of North America and require coniferous forests to survive in Western Canada. Aha! That's why they've made a home in the middle of an urban landscape - there are coniferous trees everywhere. Your reading leads you to discover that many other birds in Alberta survive on Prairie grassland. Outside your window, you look at your yard and your neighbour's yard. You see uniform green grass everywhere, which is much different from the grassland you read about.

You learn that this grass and some of the trees preferred by towns and cities don't do much to support the species from the river valley, which used to be found all over your small city. The next year, you decide to rip up your grass and replace it with native species. This isn't easy, but a few years later your experiment is starting to show some success. Your yard is no longer quiet and calm. It's full of bugs, birds and small rodents. You no longer need to water, and every year it comes back a bit stronger and richer. Where the surrounding environment was once resisted through fertilising, watering and mowing, there is now a rich ecosystem thriving. Without really realising it, you have put the seven Lamps to work in your own backyard.

Rancher Joe Engelhart represents a

real-life story of transformation from resistance to coexistence. AWA told his story in the pages of the Advocate nearly a decade ago but it's worth telling once more. For years, Joe has worked on the Spruce Ranch Cooperative south of Longview and like many other ranchers in North America, he had to cull wolves to protect his cattle.

In 2003, he decided to start doing things differently. With the help of biologist Charles Mamo, he learned about the habits of the wolves around the cooperative. He watched their movements, identified their den sites and managed his cattle to minimise conflict. This isn't easy work, and it requires Joe to maintain a consistent human presence on his land. But the results are impressive. A January 2022 CBC feature on Joe revealed that he shot his last wolf 19 years ago and is now the focus of a University of Wisconsin study on how to manage wolves without killing them. All of this is a result of his desire to find a way to coexist and adapt to the land around him, something that worked out better for him, his cattle and the wolves of the Eastern Slopes.

Now imagine this approach to wildlife and wild spaces on a country-wide scale. By taking time to learn about and understand our wild neighbours, we can completely transform our relationship with them and improve our own lives in the process. Individual stories like Joe's and the collective efforts from dedicated people across Alberta are helping to change the way we live with our wild neighbours. Their stories teach us that the ecological richness we have near so many of the places we call home is worth preserving for the health of our environment, which is also crucial to our quality of life. The better we adapt and coexist with our environment instead of forcing our environment to adapt to us, the better we'll all be for it. 🐾

Nathaniel Schmidt sits on the AWA Board of Directors and has been involved with the organisation since 2017. He recently finished his law degree and is currently working in criminal defence with Legal Aid Alberta.

82 Parks, 82 Stories:

An Odyssey by Bicycle to Explore the Diversity of Sites on 2020's "Optimizing Parks" List

By Sean Nichols, AWA Program Specialist



On a hot, dusty afternoon of July 28, I paused at the top of Range Road 100, about 7 km northeast of the town of Swan Hills, and surveyed the road ahead of me. The rough and badly eroded industrial track led down a steep hillside, and out across a broad valley. On either side, pumpjacks filled a landscape crisscrossed with cutlines and powerlines. Although the valley was several kilometres across, between the dust from the road, the smoke from BC's summer of forest fires, and the general haze, the vista became indistinct after the first few hundred metres and my eyes strained to pick out details. Near the bottom of the hill, a kilometre or two away, an oncoming truck, flatbed laden with equipment, BRAAAP'ed its presence as it worked up enough steam to tackle the rocks and cobbles of the ascent.

I grabbed a corner of the increasingly grimy dish towel I had tied to my handlebars and wiped the sweat off my brow. Somewhere down there, indistinct to my watering eyes, was Edith Lake Provincial Recreation Area, one of 164 parks and facilities that the Government of Alberta had proposed "optimizing" away early in 2020. Back at the AWA office, before setting out, I had read letters about this park sent to us from residents of the Swan Hills area, concerned about the potential loss of a beloved local fishing site. I was eager to finally see it with my own eyes.

I squinted again. Maybe it was that darker patch a little bit off to the left? Were those trees? The ragged road surface would be hell on my bike wheels and in the midsummer heat, the

climb back up particularly sweltering. Especially with the extra 50 pounds of bike, camping and camera gear I was dragging around with me. Of all the questionable backwoods digressions I could take, I didn't really want to go all the way down this hill only to discover I'd come to the wrong place.

Luckily, undertaking such a trip in 2021 offers many advantages that attempting the same would have afforded even 15 or 20 years ago. In 1997 when I cycled across Canada on my first such major trip, relying on my ability to interpret a paper map (and trusting in the accuracy of that map's lesser lines in the first place) had indeed led me down the occasional mistaken detour. On this day, however, I just pulled out my phone, waited for the GPS signal to pinpoint my location on my navigation app, and verified that the park I had bookmarked was in fact somewhere along the road ahead of me. Could a Provincial Park possibly be found in

the middle of this industrial madness? Computer says yes.

By now, the truck had managed to painstakingly lumber its way nearly up to my vantage point and the driver gave me a blast of the horn to shake me out of both my daydream and the middle of his road. I quickly dragged my bike out of the way, clambered on and began picking my way down the hill.

Fifteen precarious minutes later, having miraculously experienced no flat tyres or broken spokes in the descent (and having needed only to dodge a few more trucks) I arrived at the first confirmatory sign for Edith Lake that I'd seen in many miles. After a fashion, at any rate. On what had once been a government sign, the paint making up the standardised symbology and nameplate had long ago been sun-baked into invisibility. Instead, it was now overlaid by the rough scrawl from a local resident with a can of spray paint. In either case, the Edith Lake Provincial Recreation Area could be



New "User Maintained" signage at Edith Lake PRA. Photo © S. Nichols

reached by bearing left.

So, then. To the left, up a slight hill, around a corner, and without any further fanfare, I was at the park.

Or perhaps I should clarify. I was at a gravel parking area at the end of the road. A second sign greeted me, explaining that the Edith Lake site is now “User Maintained,” and that users are expected to pack out everything they packed in, including garbage, as there would be no trash pickup from the site.

Indeed, there would be no provincial maintenance of any sort here. No cleaning, no garbage removal.

Presumably no snow plowing in the winter, although I am uncertain whether that was ever done at this site. And no pumping out of the toilets.

This last point had been initially noted by one of the many people following my trip on social media, when I stopped at Brown Creek Provincial PRA, another site on the “Optimizing Parks” list, four days prior. At Brown Creek, a notably busier site, similar notices had been posted. In the case of Edith Lake however, the issue was rendered somewhat moot as any such facilities had been removed entirely. There were no toilets left at the park to be pumped.

Indeed other than the gravel parking area, the aforementioned signage, and a boat launch, there was precious little infrastructure remaining. A solitary fire pit, heaped to overflowing with garbage (directions on the sign notwithstanding), one picnic table, and what remained of a second. Most of this second picnic table had been hacked up for use as firewood, a few burnt ends poking out from under the heap of trash that was the fire pit.

Scattered around the parking area were an assortment of needles, speaking to the nature of the use that the campground continued to see.

The lake itself remained beautiful however. And its setting couldn't have provided more of a contrast to the industrial badlands I had traversed on the approach, being nestled in a few hectares of dark green, lush boreal forest. I could imagine that local residents of the Swan Hills area, if perhaps having less need for a campsite, likely continued to

use the park for its fishing opportunities.

I poked around the site, took a few photographs, noted its sorry state, and got back on my bike to tackle the long hot dusty climb back up out of the valley.



Edith Lake was the 76th of 82 parks that I visited on my bike tour spanning the month of July 2021: exactly half of the 164 sites indicated on the government's list. Although its state of neglect was the most extreme of all those that I called in on, its story was in several notable ways representative of the whole.

To survey all of those 82 parks would be to note two opposing observations: every park tells its own story, boasting features, a history and patterns of use that are indelibly unique. Yet at the same time there are many threads of commonality, many points of intersection where those individual stories join and echo the same repeated themes.

When I finally returned to Calgary following the end of the bike tour, it was with the realisation that the trip was ultimately a month-long exercise in reconciling those two truths.

It hadn't started out that way, at least not deliberately. Although on reflection there may have been a subconscious understanding of this aspect even from its earliest days.

Those early days would find me in December 2020 when we were all in the grip of the uncertainties of the Covid-19 pandemic. I was working on a social media campaign to highlight the parks that the Government of Alberta had announced they were to delist. I was finding photographs of the parks, compiling data about them to use in our analyses, and reaching out to AWA members, Albertans, tourists and visitors, anyone I could find who had been to the parks and could tell a story, in their own words, about what their favourite park meant to them.

At some point in this process I came to the realisation that I myself had only been to maybe a half dozen of the parks under discussion.

I don't consider myself a slouch when it comes to my ability to get out into our

province and discover its hidden corners. But yet the fact was staring me in the face: I needed to collect photos and stories from other people partly because I had none to provide personally.

It seemed that even I, with the nature of my work at AWA and my penchant for travel, had been taking these parks for granted, complacent in the mere fact of their existence. It was little wonder, then, that the provincial government believed they would be able to get away with delisting them in one giant swipe of a pen, without much resistance. How many other Albertans might also be taking our network of parks for granted?

In this realisation lay the seed of an idea: I wanted to see these parks for myself.

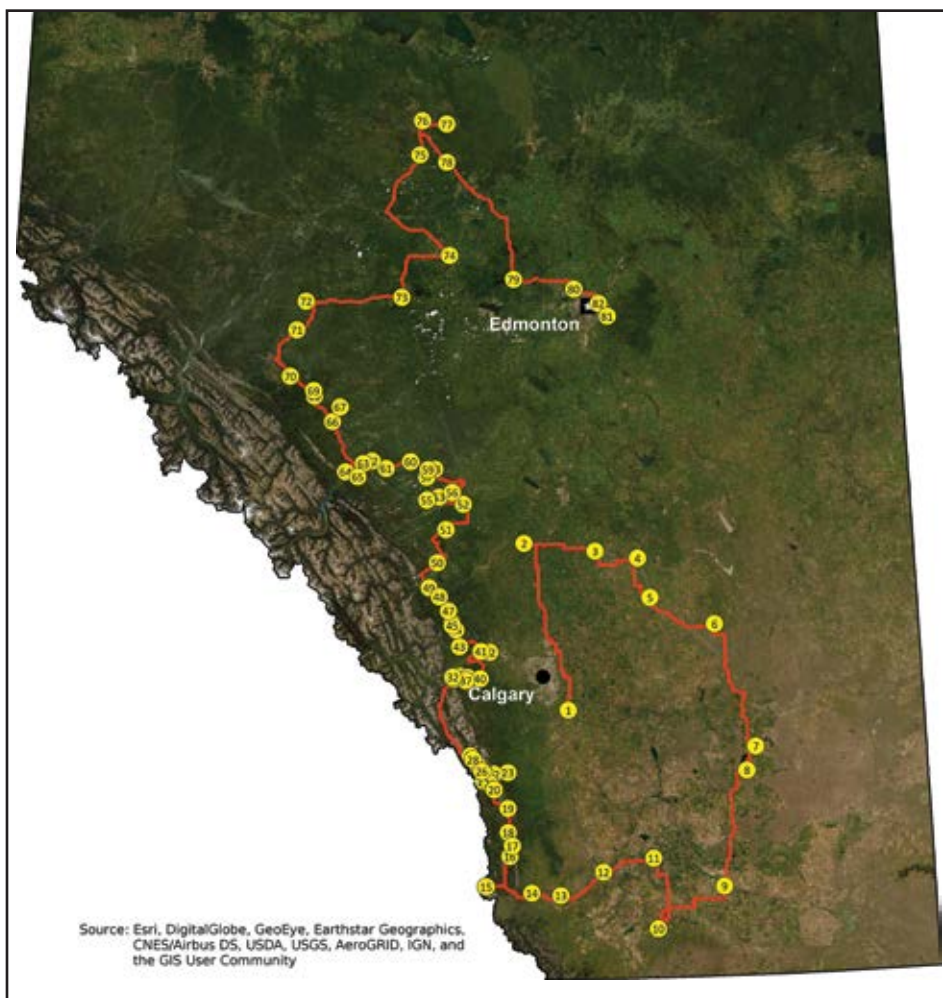
As I went through the list that I was preparing for our social media campaign, I could not help but be struck by the sheer magnitude of that list. It is one thing to consider the number “one hundred and sixty four.” It is quite another to be swallowed by the process of spending days upon days teasing out the features that define every one of them. Here is a park that is to be closed. And here is another. And here is another. And here is another. And another. And another.

After 163 “anthers”, one is quite overwhelmed. It becomes a blur. But a fascinating blur and one cannot help but to want to ground oneself; to find some way of making it feel less like a blur.

My initial plan, then, was a little on the ambitious side: I knew I wouldn't be able to get to all 164 parks in a month – they were laid out in such a way that there would be too much backtracking, and a few instances where I would have to bike several hundred kilometres out of my way to visit a single park. As worthy as they might have been, those were ones that were quickly struck from the itinerary.

But I'm no stranger to long-distance cycling, and had hoped that 3,800 km over the course of a month would be doable, allowing me to visit perhaps three quarters of the list.

What I had not anticipated, would be how much time I would end up spending at each park. Partly because



Map showing route and all the parks visited on the tour.

of the need to investigate the state they were in, and partly because so many of them were so captivating I didn't want to leave.

In the end, with a little bit of racing in the final days, there was 2,714 km on the odometer and at 10 a.m. on July 30 I pulled into Strathcona Science Provincial Park in Edmonton for a pre-arranged picnic lunch and meet-and-greet with several of the adventure's supporters. It was park number 82: I had made it to exactly half.



The approach to Strathcona Science Provincial Park, despite it being miles away from Edith Lake both literally and figuratively, bears more than a passing resemblance to the approach to the latter.

Lying along the southeast bank of the North Saskatchewan River and sandwiched between Edmonton and Sherwood Park, the park sits on land

carved out from oil refineries and petroleum processing facilities. Below the park is an abandoned coal mine.

Envisioned in the heady days of the late 1970s' boom when anything seemed possible, many of the facilities today are abandoned; shuttered and boarded up. Yet it is still an oasis of tranquility, wildness and greenery within that industrial landscape. Workers at the surrounding plants spend their lunchtimes at the picnic tables at the park, offering a welcome change from the fire and aluminium of the refineries.

This similarity speaks to one of the threads of commonality running through many of the sites on the closure list, and indeed many of our parks across Alberta.

They are all oases; areas of respite where the wilderness has the chance to establish a bulwark against the creeping industrialisation of the entire province. Visiting so many of these parks surrounded by coal mines, or oil wells,

or refineries, or windmills, or cut blocks, it is a repeated theme: there is no place—no place—in this province that is not in the footsteps of industry. This network of little parks and sites, some no bigger than a postage stamp, is all we have to hold back that tide.

When defending their decision to close these sites, the government of Alberta pointed out, ironically, that many of the sites were small. This may be the case, but as it stands, small is often all we have. Even though almost 15 percent of the province's land area is protected in some manner, most of that is by virtue of the national parks in the rocky mountain alpine, or the far northern boreal.

These are not a representative sample of Alberta's natural areas and biodiversity. Less than one percent of our parkland is protected, and only a little over one percent of our grasslands and foothills are protected. When one scans over the grasslands on a map of the province, it is close to impossible to even see any parks there. The 1.25% of the grasslands that are protected come as a scattered archipelago of tiny sites, often only a few hectares. They hardly even register at the provincial scale.

To close these sites would have been to do away with much of whatever network we have.

And to be sure, that network punches far above its weight when it comes to the ecosystem function that it supports.

When defending their decision to close these sites, the government of Alberta also claimed that many of the sites were under-used. Whether or not that is the case (more on this later), such a claim belies a fascinating, if unsurprising, myopia regarding the nature of the term "use."

What the government meant was that the sites in question do not always see a lot of "use" by humans. This does not remotely represent the level of use they see from birds, from other wild animals, from any number of plants and other species whose native habitat is being destroyed by industry or the monoculture spreading across Alberta.

The 79th park I visited, sixty kilometres northwest of Edmonton

as the avian species fly, is the former Gunn PRA, on the north shore of Lac Ste. Anne. This is one of a dozen or two parks whose facilities had been previously closed, and so found its way onto the list to be removed entirely from the provincial inventory.

As a former PRA, it naturally sees little ongoing use by human beings. There are no visitor facilities at all save for a gravel access road ending in a parking area. Yet visiting the site, surrounded by agricultural lands on one side, and gas stations & RV storage yards on the other, made it viscerally clear why it remains important to have these places.

Even if there are no extant recreational facilities, these “closed” parks remain oases of wildness and natural function in a disturbed landscape, just as much as the undeveloped Natural Areas and Ecological Reserves perform similar important functions.

Even if they no longer feature a campground or day-use area, they need to remain on the public roster, not surrendered to potential future development. It is not only *homo sapiens sapiens* that uses these sites.

When considering these parks I cannot help but be reminded of the array of islets and atolls scattered across the South Pacific Ocean. They are tiny, and sport a slim human population. Yet the entire region teems with a rich and diverse avian population, soaring across innumerable miles of open ocean before occasionally alighting on one of these dots to rest, recuperate and feed.

Without the islands, there are no birds.

Underlining this point, I recall the 6th park I visited: Little Fish Lake Provincial Park.

On July 9, I inched my way up a gravel hill just north of East Coulee climbing out of the Red Deer River Valley and onto the surrounding prairie. It was hot, without a speck of shade, and the road was gravel, frustratingly soft from having been recently graded. My road bike was not made for such conditions.

I eventually gave up and walked the last few hundred metres. At the top of the hill I got back on the bike and ground my way along the road heading



Little Fish Lake PP – breeding ground for the endangered piping plover. Photo © S. Nichols

east across the badlands of Special Area No 2. After an hour or so of this I was passed by a pickup truck; the driver slowed down and considered me with some incredulity before finally declaring that they didn't see many cyclists out that way.

Indeed they didn't see many people at all. I passed no other vehicle before finally arriving at Little Fish Lake Provincial Park, on the east shore of the eponymous lake.

The Park in question is 1.1 square kilometres, at the larger end of the grasslands protected areas. There's a campground there that was entirely empty on that day (although a local later told me it gets some “use” in the fall fishing season). I hung out and recovered in the shade beneath the scraggly trees for a while, the only person for miles around.

After a while I wandered down to the lake shore, and came across a sign informing me that the Park is the summer habitat of the piping plover. There are approximately 6,000 of these birds left in the world.



After leaving Little Fish Lake I headed south toward Brooks, where I spent the night.

The following day I stopped at the park

that, of all those on my tour, is probably the most different from those mentioned above.

Kinbrook Island Provincial Park is on Kinbrook Island in Lake Newell, a few miles south of Brooks. With 200 camping sites, several beaches, playgrounds, day-use areas and other facilities, it is a large year-round park that is a local favourite.

On this sunny summer Saturday, Kinbrook Island was full.

This is an understatement. Kinbrook Island was bursting at the seams, with every campsite in use, every parking spot full, every overflow parking spot full, people parked along the sides of the access roads and out along the highways. There were lineups dozens of people long to use the toilets and other facilities.

Kinbrook Island Provincial Park is primarily oriented toward human use, though it does also boast sizable wetland areas and bird-watching opportunities.

At \$40 per campsite per night, I cannot fathom a reason for this site to have ever been considered for closure, if the intent was to save money. There is no reason why this park shouldn't have been making money for the government. My experience there also raises questions about the claim that the parks are under-used, even acquiescing to the presumption that “use” only include human users.

As a child, I grew up in Singapore, a small island city-state with limited wilderness in the sense that we are privileged to know it here in Canada. Consequently any notion of camping takes on a rather different character than we may be used to, with camp outings (including tents and sleeping bags, to be sure) taking place in campsites in an urban park setting.

I have memories of “camping” in this sense in the East Coast Park, a small slip of land squeezed between the East Coast Parkway and the ocean, a few miles from the city centre. The park would be overflowing with other campers, picnickers and barbequeuers, enjoying an overnight experience only a few minutes’ drive from home.

My afternoon at Kinbrook Island Provincial Park was reminiscent of those childhood memories. I noted that many of the people enjoying their camping experience seemed to be first-generation Canadians, which is a reflection of the demographics of nearby Brooks. Parks such as Kinbrook serve an essential role as a welcome to new Canadians, and an introduction to the natural and wilderness resources we have on offer.

Thus the second thread of commonality uniting all the different parks I experienced: overwhelmingly they are used and beloved of local residents.

From local fishers in the Swan Hills area afraid of losing Edith Lake to local new Canadians in Brooks learning to enjoy Alberta’s wilderness at Kinbrook Island. Most of these parks aren’t going to grace the cover of international magazines drawing tourists from around the world. Most of them get regular (human) use by people from the same area: people who know and fiercely value what these parks have to offer.

On July 21, park number 52 was Mitchell Lake PRA, just southwest of Rocky Mountain House. I wasn’t sure what to expect from Mitchell Lake. Were it not for the list, I’d have barely known it was there. There is minimal highway signage and access is via a single-track dirt road through a cow field.

But after dodging the cow-pies (and the cows!) and passing through the



Caption: Sean setting out from Benchlands on Day 14. Photo © H. Unger

park gate, I suddenly descended a forested hill to find the road ending at an unexpected captivating, hidden lake. The campground there was small; it was clear that fishing is the park’s main draw.

And a draw it was – there were a good 10 vehicles that day in the parking lot at the bottom of the hill. It was obvious this was, yet again, a site that locals know well: one of those “best kept secrets” that often get touted but less often live up to the name. However by all indications, this one clearly did.

This is a story that was repeated time and again at so many of the parks I visited. All up the Trunk Road along the foothills of the Eastern Slopes I would stop at campsites and talk to people in their campers and tents. I would ask them where they were from and why they chose to come to that park. Very often I would be informed that they were local, that they had been going to that park for years and that it was a favourite spot. Many had stories of visiting the park with parents as a child. Several talked about bringing their children to camp at the same park. Some had heard of the government’s plan to close and delist the parks, others not. But nearly all agreed that to do so would be a terrible loss.

• • •

So what was behind the delisting plan?

All I have is conjecture. I offer a few more observations:

The 33rd and 34th parks I visited were the Old Baldy Pass Trail PRA and Stoney Creek PRA. They are located near the junction of Kananaskis Trail and Sibbald Creek Trail, at the north end of Kananaskis Country. The first of these is one of the few of the parks I had been to before, and holds a special place for me.

Over 15 years ago, shortly after I moved to Alberta for school, I attended a conference/workshop at the Barrier Lake Field Station. One of the day activities was a hike up Mount Baldy. This was my first hike ever in Kananaskis (or indeed Alberta).

The Old Baldy Pass Trail PRA exists solely to encompass the trail. It has no other facilities of any kind. It costs next to nothing for the government to operate or maintain. Why would it have been scheduled for delisting?

The “active logging” signs along the trail gave my cynical mind its first possibility. Was it because the government wanted to turn this area over to logging, and the trail was getting in the way? Yet... that makes no sense. Logging has been going on in this area for years. Indeed all of the eight parks



An administrative mismatch – the facilities slated for closure at Stoney Creek PRA haven't existed for years. Photo © S. Nichols

along the Sibbald Creek Trail were established as a joint project between the government and Spray Lake Sawmills — the forestry company holding tenure rights in this area.

In fact, the logging in this immediate area has ended and this logging road, if one reads the signs, is in the process of being reclaimed.

A clue came when I considered the second of these two parks: Stoney Creek PRA is the trailhead for the Old Baldy Pass Trail, and per the 2020 proposed closure list, its day-use area was to be redlined. However that day use area is long-gone. It was turned over to a group use site (and chained up behind a gate unless you have a reservation) many years ago. Signage indicating this dates back to at least 2008.

My only conclusion is that, whoever selected these sites for delisting has never been there, and knows nothing about them. There was no careful selection based on the individual reality of these parks; rather someone drew a big circle around them on the map and – knowing nothing about them – chose to delist them all wholesale.

Stoney Creek PRA was in fact hardly the only park for which the stated details of its closure did not match the situation on the ground. Several times I encountered a park where the plan was to delist and/or close some facility that

simply did not exist in reality. It became increasingly clear over the course of my trip that the decisions were being made in an office by staff or managers who were not particularly familiar with the parks in question, and unlike myself, had likely never visited them.

An interesting example of these discrepancies was at the Cow Lake NA (Natural Area) west of Rocky Mountain House, park number 56 on my itinerary.

I first arrived at the Natural Area to discover no signage anywhere, save the standard yellow placards in the bushes marking the NA boundary.

This in itself isn't that unusual;

Natural Areas often don't have directional highway signs. Although second-hand reports are that Cow Lake used to have signs to the day use area, possibly removed as part of the first wave of infrastructure removal that occurred when the closures were initially announced.

Either way, I was hardly deterred, and proceeded to the exact location of the day-use area that was slated for closure, as listed on the AB Parks website at 52.2944 N, -115.0296 W. And there I discovered no day-use area, but instead an oil and gas facility including a few pumpjacks.

Was this ever the site of the day-use area? Probably not – however per the Wilderness Areas, Ecological Reserves, Natural Areas and Heritage Rangelands Act (2000), such a facility is not allowed at all inside a Natural Area.

The one exception is if the facility predated the establishment of the NA. It is entirely possible that this was the case here. The second-hand reports referred to above indicate the facility did not predate the NA, however these cannot be confirmed.

What I did establish, was that a few kilometres around the lake to the west is an area that is marked by government signage as the Cow Lake PRA. Yet this is a PRA that doesn't exist anywhere on the Parks website. All that's here is a private campground; no day-use area, like the



At Cow Lake NA – this facility shouldn't exist inside a Natural Area. Photo © S. Nichols



The end of the trip: Strathcona Science Provincial Park. Photo © S. Nichols

one supposedly slated for delisting.

A half-kilometre on the other side, however, there is a day-use area, again unmarked by highway signage, which is inside the NA. This area encompasses a boat launch, picnic facilities, and so forth. This is most likely the day-use area that's been around for a while and was scheduled for delisting.

But with the various government websites all giving conflicting information, none of which is consistent with the situation in reality, questions are raised about the ability of decision-makers to make accurate assessments regarding the suitability of closing such a site.



Of course, the government of Alberta chose to reverse its decision and, at the end of 2020, announced that they would not proceed with the delisting.

Unfortunately this announcement, while broadly welcome, raises additional questions. If my observations last summer are anything to go by, the answers may be concerning.

Foremost is the question of what is now to become of these parks. Indicating what won't happen (being delisted) still leaves a broad set of options for what will happen. It is likely that there will not be a "one size fits all" future for them. As observed, despite threads of

commonality, each of the sites is different and invites a different potential policy.

Some may be left as-is. In the case of Natural Areas or other low-development and low- (human-) use parks this is likely appropriate. I have little doubt that those parks seeing heavy use, such as Kinbrook Island, Tillebrook Provincial Park, several sites in Kananaskis, and so forth, will likely see continued maintenance and investment. This is especially the case with the Kananaskis Conservation Pass introduced last summer.

Far more worrisome is the fate of the parks that lie in between. Parks such as Edith Lake, as well as several other parks I visited: Brown Creek PRA, Brazeau River PRA, Pembina Forks PRA, Lovett River PRA, Freeman River PRA, Chrystina Lake PRA, and any number of others. What I saw is a future where the park is left technically on the books, but all maintenance is halted and the government all but pulls out.

Such sites exhibited a variety of different states of deterioration, but all suffered from the lack of maintenance. All exhibited a noticeable increase in the level of garbage and increase in lawless behaviour. For the government to simply wash their hands of these sites may end up merely being a slow death rather than a quick one.

Of this, however, I am sure: the locals

will continue to use them. And so will the wildlife. Maybe a bit of wilderness reclamation isn't such a horrible thing.

Of one more thing I am sure: these parks will definitely suffer without anyone to champion them. They need people to speak up for them, to continue to let the government know that they are an essential part of this province's fabric.

I ended my trip at Strathcona Science Provincial Park on the Heritage Day long weekend. As I said at the time to those assembled there, it felt appropriate to do so, because I can think of no better example of the heritage we have as Albertans than our Parks system. It is a heritage passed to us by those who came before and who had the foresight to establish the Parks to begin with, and a heritage we can all commit to passing on to future generations.

So I have an ask to make: I am looking for people to make that commitment. I am looking for champions for these Parks, and all the others across the province. Specifically, I hope you will take the time to visit one (or more) of Alberta's Parks this summer. It may be one of the ones slated for delisting, or a different one. It may be one that you have visited before or one that is entirely new to you. Whichever it ends up being, I hope that you will get out this summer, find a Park that speaks to you, learn about it, and be ready to speak up if and when it is threatened. The more voices there are, the stronger our Parks will be. 🍄

This bicycle trip was undertaken as a part of AWA's Adventures for Wilderness (A4W) program. The author will be leading a 2-day bikepacking tour for 10 people along the Cowboy Trail on the Canada Day weekend as part of the 2022 A4W calendar. To sign up, find out more, or discover other adventures taking place in 2022, please visit www.AdventuresForWilderness.ca.

A full record of the bike tour, with photos and stories from each park, can be found at www.AlbertaWilderness.ca/bike-a-thon.



CUB REPORTER



By Abigail Hadden

Abigail is a grade 7 student who lives in Calgary. She loves nature and especially exploring forests. Abigail is an avid rock climber. She also spends a lot of her time with her dog Poppy and they are a dynamic agility duo. She hopes that when she is adult that there will still be forests to enjoy and hidden waterfalls to find.

Coots, Red Winged-Blackbirds and Cattails, Oh My!

I wish I could include a sound-bit for this story. The call of the coot, the trill of the red-winged blackbird and the “cheeeeeeezeburger” call of the chickadee all create a beautiful wetland symphony.

Spring is finally here, marked by the arrival of oodles of wetland birds and animals. When Edgemont was being developed in the 1980s, the first man-made wetland, Edgemont Ravine Park and Wetlands, was designed as a pilot project in the City of Calgary. Today, that project remains a huge success. Not only does it provide storm water storage and water quality treatment, but it also creates a habitat for wildlife, beautifies the neighbourhood, and adds another place to learn about how different animals make this place home.

Through all seasons, this wetland serves as a corridor for a multitude of wildlife. Wildlife needs a corridor to move through the busy city. Our ravine allows movement from Nose Hill Park all the way down through the communities of Dalhousie, Varsity and Silver Springs to the Bow River. We have spotted fauna such as bobcats, coyotes, white-tailed deer, red foxes, crows, owls, downy woodpeckers, robins, house finches, Canada geese, magpies, muskrats, salamanders, bumblebees, dragonflies and butterflies. When we are walking along the paths we also find elegant, native flora such as wild rose bushes, crocuses, wild buffalo beans, cattails, aspen forest, spruce trees, brown-eyed susans, and even yellow lady's slipper orchids.

As our city grows, there are many pressures being put on wildlife. But wildlife can adapt, survive and thrive if we do our part. There are all sorts of seemingly small things we can do that help wildlife in a big way. Ensuring that

a leash (and picking up their poo AND packing it to the nearest garbage bin) and letting wildlife have space are just a few ways we can demonstrate respect to all urban wildlife.

Urban wetlands are unique places that are safe havens for wildlife. In Calgary, we are very lucky to have places such as Bowmont Park, Nose Hill Park, Fish Creek Provincial Park, Edgemont Ravine Park, Pearce Estate Park, Inglewood Bird Sanctuary and Carburn Park, just to name a few. Each place provides habitat for urban wildlife and spaces for learning and recreation.



We know it is really springtime at our wetland - the red-winged blackbirds have returned and they are singing their hearts out. Photo © Dan Olson

our garbage, recycling and compost are properly stowed, creating native plant gardens, building bee boxes, picking up litter, taking pictures of wildflowers – not picking them – walking with our dogs on



I am at the Edgemont Ravine Park and Wetlands sign. As I was observing the pond, a mallard drake in full beautiful colours, came in for a landing! He was so majestic! Photo © Heather Hadden

I hope that sometime soon you will get to go to an urban wetland near you! 🐾

Re-imagining the future of Canmore

By Robin Pollard and Tenaya Lynx



Today, we are reimagining our futures. We're imagining a healthy climate that will host thriving communities and vibrant ecosystems, where governments prioritise food security, affordable housing, and community care. Overwhelming issues like the current climate crisis, human-wildlife conflicts and decolonisation can be intimidating and so it is a true honour and privilege to remain engaged on a matter so close to our hearts.

As settlers on these Lands, our futures are entirely grounded on Treaty 7 Territory Lands of yā é Nakoda (Stoney), Tsuut'ina (Sarcee), Kainai (Blood), Piikani (Peigan) and Siksika (Blackfoot) Nations, and within Region 3 of the Métis Nation of Alberta. The futures we envision uphold and respect Indigenous laws, languages, and protocols, thereby honouring Indigenous self-determination and sovereignty. Part of our personal accountability work comes from UVic Cherokee Professor Jeff Cornassel, who teaches us that when people introduce themselves, they are introducing what you can expect from them on these lands and how they will remain responsible and accountable. We have been raised by our parents and our community. These connections to place and community are why we became involved and advocated for the Three Sisters wildlife corridor that passes through our hometown, Canmore, Alberta.

In 2016, when Three Sisters Mountain Village (TSMV) submitted Area Structure Plans to the Town, our mentors encouraged us to engage in the municipal process. We raised awareness with youth and spoke about the significance of the proposed developments, namely their impacts on Canmore's affordability and encroachment on significant East to West

wildlife corridors in the Yellowstone to Yukon Region.

Canmore residents struggle to find solutions to human-wildlife challenges and face a multitude of social justice issues, such as classism, unaffordable housing, and expensive cost of living. It is discouraging to feel the increasing financial pressures of living in a tourist town and seeing loved ones leave. TSMV, and other developers, build luxurious homes when long-time community members are being forced out from unattainable living costs.

Grounding ourselves in this reality reminds us of the future we are working towards. A future that is healthy for the people, lands and waters that surround us. A future that upholds consensual and reciprocal relationships between places, Indigenous and non-Indigenous peoples. Our imagined future is in our collective reach. It can be realistic, and in our opinion, it should be more realistic than capitalist practices of "progress" which encourage profit over people.

In holding space for creating a dynamic and healthy future, we also believe in the importance of imagination which shapes our world and how we engage with it. There are so many structures around us that are imagined and yet have incredibly tangible effects. Enough people have decided that the social constructions of patriarchy and white supremacy are real, and that makes them real. Reimagining what is real in a way that centres on joy, equity, and coexistence with the planet is possible and can have tangible effects on our futures.

Our imaginings include a liveable future, perhaps a thriving and healthy future! They include affordable housing, food and

job security, and the possibility of working in our hometown. They include access to natural spaces in a way that respects Indigenous relations to the land and water. These ideas should not be radical.

There is fantastic work being done reimagining our future in the Bow Valley. The "Resilient Canmore" group's work is not yet public but is one example of people coming together to build relationships amongst historic adversaries, helping people envision a better future.

We hope to leave you with the recognition that there is nothing too outrageous, too radical, and too out of reach for our futures. Everyone has gifts and can contribute. It is this diversity that is so necessary to create a future where all living beings, the earth, and the water are respected. 🌱

Robin is a student at UVic and grew up in the Bow Valley. Robin is passionate about creating connections with people and is guided by a deep love of the environment.

Tenaya Lynx is also a UVic student, studying geography and social justice. Tenaya's love for animals and community comes from her childhood in Canmore.

Editor's Note: On May 17, 2022, the Land and Property Rights Tribunal of Alberta overturned Canmore Council and approved Three Sisters Mountain Village Properties Ltd.'s development. Opposition continues and next steps are pending. A \$161 million dollar lawsuit from the developer against the Town is ongoing.

Finding Wild Spaces in Urban Places

By Norine Ambrose, *Executive Director, Cows and Fish*



Do you ever wake up with this sense of some dream you had, but no matter how hard you try, you can't remember what it was about? You have a sense or feeling, but no concrete understanding. I think that same hard-to-catch feeling is true when we try and pin down the feeling many of us get when we go into wild spaces – a deep sense of joy, or reinvigorating energy, or wonder. But it is hard to pin down why.

When I go to an urban park, I have different expectations from when I go to a national park or public land in the western part of Alberta; but I still hope to gain some of that energy, joy of the outdoors, a sense of being in the right place. Likewise, when I am in rural, settled landscapes, whether farms or acreages, I still want that feeling. And I expect that those using land across Alberta - from urban green spaces around built stormwater ponds to mountain parks - want it too. They are enjoying, while also stewarding, these places to be healthy.

Because of the work I do at Cows and Fish, I know I have a heavy focus on riparian areas; those shores, floodplains and stream banks that surround waterbodies and have moister soils than surrounding lands. It is hard to go for a walk and just blissfully ignore the weeds, bare soil, or lack of deep-rooted willows and cattails that surround popular spots to hike, fish, or skip rocks, including in urban areas. Often, we have built our cities expecting we have to 'give up' expectations of healthy, functioning landscapes, particularly in urban areas. But why? Why can't I get that 'feeling'? Why can't we have urban riparian areas

that filter water, that provide wildlife habitat, that reduce flood and droughts?

Some of our big urban river valleys, from Edmonton's North Saskatchewan River and ravines to Lethbridge's Oldman River valley with its coulees, are expansive and quite natural. Meanwhile, many smaller urban ponds, natural wetlands or streams, squeezed within and between residential and industrial areas, offer an amazing opportunity to recharge and support elements of wilderness and natural ecosystem functions, if we help them do so. Our use of land and water is cumulative, including in urban areas; positive actions are cumulative, as are negative activities that degrade the land and water. Strolling around an urban stormwater pond in my neighbourhood, I am optimistic for the future when I see more than the typical rocks lining its edges. I am encouraged by the cattails and willows, acting as singing perches for red-winged blackbirds, slowing down runoff and trapping pollutants. I still hope to see the lawn mowing around the edges reduced, to give the chance for more filtration, more habitat.

I've learned over 22 years working with Cows and Fish, now in our 30th year, that the same ecologically sustainable principles apply to grazing, to off-highway vehicles, hiking and lakefront and urban residential lots. It is just different practices of use that apply to each. In collaborative work with the Alberta Low Impact Development Partnership a few years ago, we developed joint content to help urban dwellers to understand the connection from Street to Stream (www.Cowsandfish.org/digital-stories/street-to-stream). Supporting healthy rivers and

clean water doesn't start at the riverbank, but in the street, in the yard by trapping water and reducing erosion.

In my own new-to-me urban yard, I'm working hard to implement key principles that have been the cornerstone of my work with Cows and Fish by working to create habitat, to hold and build soil, and planting perennials and native plants. This also includes supporting more plants, balancing intensity of use and adding rest to plants (aka mowing less). I try and shovel the snow onto my lawn, not off the driveway and into the street. By keeping the runoff on site, I take the pressure off our natural waterways that otherwise have to deal with it, not to mention creating moist soils to naturally water the lawn, reducing water demands later. Through my actions, I can contribute to healthy landscapes, adding just a little nature to my own community.

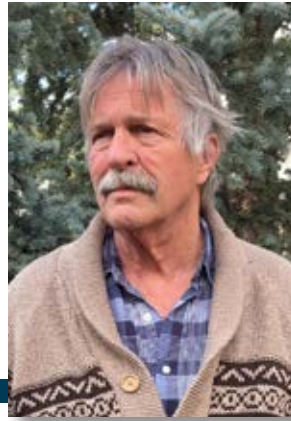
Urban green spaces, combined with our front lawns, backyards and boulevards, all have potential to add ecological function from street to stream, and contribute to lighten our hearts and our steps – bringing that feeling of wild spaces into our urban places. How do you find that feeling in your urban spaces? 🌱

Norine Ambrose is Executive Director of Cows and Fish, also known as the Alberta Riparian Habitat Management Society. Cows and Fish works to foster a better understanding of how improvements in grazing and other management of riparian areas can enhance landscape health and productivity, for the benefit of landowners, agricultural producers, communities and others who use and value riparian areas.

Big Hill Springs Provincial Park

– An Environmental and Geological Treasure

By Tako Koning, *P. Geol.* and Dale Leckie, *Ph.D., P. Geol.*



Big Hill Springs Provincial Park was established in 1957 and is one of Alberta's oldest provincial parks. The park was created due to its outstanding natural beauty and because it has cold-water springs which flow year-round. The springs in the park are a valuable Alberta natural resource and must be treated with respect by its many visitors. The springs should also be protected from nearby resource and gravel mining that could affect the springs water flow and chemistry.

The spring water has a constant temperature of about 6°C, so the water flows continuously even in the depths of winter when temperatures can get a low as minus 40°C. Big Spring Creek is small, only a few metres wide, but at tufa dams the width can be up to 10 metres. The creek is shallow with a depth of one metre, although some pools in the creek are more than two metres deep.

Big Hill Springs Provincial Park takes its name from the small spring which enters the valley of Big Spring Creek from the west. The spring originates from groundwater that flows from sandstones of the underlying Paleocene-age Paskapoo Formation bedrock and also from overlying preglacial sands and gravels. The actual spring outlet is located nearby on private property beside the west boundary of the park. Several small springs also enter the valley near its downstream end.

Tufa Coats Everything

The spring water contains an abundance of calcium carbonate in solution, coming from dissolved calcite cement and limestone shell fragments in the

bedrock of the Paskapoo Formation. As the springs emerge at the surface, carbon dioxide (CO₂) is released from the water as it cools, causing the water to become supersaturated with calcium carbonate (CaCO₃). This precipitates into multiple layers of a limestone deposit called tufa.

Tiny crystals of calcite precipitate as stream riffles, waterfalls, and where there is splashing water to stick onto coatings of algae and bacteria. Aquatic mosses, algae, lichen, bacteria, plants, sticks, and insect larvae create a framework for the tufa to build up. The tufa coats everything in and along the water course, forming a series of rock dams with several waterfalls in the park.

An impressive aspect of the park is several older and inactive dams that measure up to 110 metres across and six metres high, constructed of tufa which has encrusted vegetation and cobbles. The dams have been locally breached or have small waterfalls that are up to two metres high. Turbulent carbonate-saturated water cascading over the waterfalls and shallow rapids, constantly splashes the banks of the creek. Mossy hummocks grow luxuriantly along the stream banks in the splash zone of the well-aerated water causing calcium carbonate to precipitate as tufa that coats and stiffens the moss.

Elsewhere along the stream, where the water is calmer, calcium carbonate precipitates on cobbles, pebbles, logs and leaves. Vegetation rots to leave holes or porosity in the tufa. Along the length of the creek, long filaments of blue-green algae, also called cyanobacteria, drape the fossil tufa dams.

Significant research has been done on the geology and hydrology of Big Hill

Springs Provincial Park. In his 2007 thesis *Establishing a Recharge Area for Big Hill Springs, Alberta, Canada*, for the University of Calgary's Department of Geology and Geophysics, Soren Poschmann noted that water in the springs originates from rain and snow melt that makes its way into a buried pre-glacial valley filled with gravel and sand, located to the northwest of the park. There is likely a contribution from the underlying Paleocene-age (~60 million years old) Paskapoo Formation consisting of non-marine sandstones, siltstones and shales. Sandstones of the Paskapoo Formation are water-bearing throughout the area with the porosity occurring between the sand grains. It is also naturally fractured with horizontal and vertical fractures due to the effect of the uplifting of the foothills and Rocky Mountains to the west. The emerging spring water is relatively young, taking only 5 to 10 years to make its way from its rainfall and snowmelt origin to where



© D. Leckie



Tufa deposits at Big Hill Springs Provincial Park. Photo © H. Koning

it emerges from the springs. The flow of water out of the springs over thousands of years has resulted in the spectacular outcrops of tufa which occur in the park.

Two recent guidebooks for the public have described the geological history of Big Hill Springs Provincial Park. Calgary geologists Philip Benham and Yingchun Guan in 2019 described the springs in *Go Take a Hike – the Geology of Trails in the Canadian Rocky Mountains and Surrounding Areas*. They say that the springs are active year around and create a microclimate that extends the growing season. They describe the tufa deposits and emphasise that the deposits are limited and fragile. They also point out that dendritic growth patterns in the tufa are related to tufa formation on mosses. Growth of tufa may be aided directly or indirectly by microbes that coat mosses, cyanobacteria (blue green algae) and other organic materials. Benham and Guan write that, as the springs surface, the supersaturated waters degas carbon dioxide (CO₂), triggering an increase in pH and then the precipitation of carbonates.

Dale Leckie, in his 2021 book *The Scenic Geology of Alberta* describes the origin of the springs and also highlights the fragility of the biological environment in the park.

In 2004, Marie-Eve Garon wrote a thesis titled *Hydrology of Big Hill Springs* for a post-graduate course in Environmental Studies at the University of Calgary. She described the springs as having the highest water flow rates of the region with a range of 20 – 1600 litres per minute.

The Need for Protection

With the exception Fish Creek Provincial Park, there are few if any publicly-accessible natural areas close to Calgary that are heavily treed and have a picturesque creek running through the park year-round. Big Hill Springs Provincial Park is one of the closest parks to Calgary at a distance of only 27 km from the city's western boundary. Its beauty and accessibility are the reason why it receives 250,000 visitors per year. The water in Big Spring Creek is shallow and children love to wade and play in the stream.

However, the heavy visitation by the public should be regulated to ensure that visitors stay on the existing trails to prevent damage to the springs and the unique tufa deposits. Provincial government regulators should ensure that the springs are not affected by farming and ranching near to the park, or from nearby gravel mining. We owe it to our children and grandchildren and future generations to preserve these beautiful springs and park. 🌿

Tako Koning, PGeol. is Holland-born and Alberta-raised and lived and worked worldwide as a petroleum geologist. He leads field trips for the AWA as part of its Adventures for Wilderness program.

Dale Leckie, Ph.D., PGeol. has written two best-selling books on the geology and landscapes of Alberta. His recent book The Scenic Geology of Alberta: A Roadside Touring and Hiking Guide encourages people to get out and explore the natural beauty of the province. A portion of this article was excerpted from his book.

Grizzly Bear Management in Alberta:

Jumping the Gun on Grizzlies

By Devon Earl, *AWA Conservation Specialist*



Last spring, you may have heard Alberta Environment and Parks Minister Jason Nixon proudly exclaim that our grizzly bear population in Alberta is “thriving.” This strong language comes from some recent bear population inventories, which indicate that grizzly populations in certain areas may be increasing. This is particularly true for Bear Management Area 4 (Clearwater, East of Banff National Park), where the population estimate went from 47 in 2005 to 88 in 2018. However, this is just one of seven bear management areas (BMAs) in the province.

We have never had a very confident estimate of how many grizzly bears live in Alberta. Since the early 2000s, bear population monitoring has been done sporadically in various BMAs, by numerous groups in different years. In 2010, the best guess at the grizzly bear population in the province was 700-800 bears, given that not all BMAs had a population estimate. BMAs 3 through 6 have now each been assessed twice, and estimates indicate that these populations are stable or increasing. However, differences in methodologies between years shed some doubt on these conclusions. In any case, the first population estimate in BMA 7 (Swan Hills) was just done in 2018 (published in 2021), and up until then we had little idea how many bears lived there. The first population estimate for BMA 1 (Chinchaga), was published in 2019, but was not included in the 2020 Grizzly Bear Recovery Plan.

Although the stable or increasing grizzly bear population estimates

in certain BMAs are encouraging, AWA urges caution when making assumptions about the Alberta grizzly population. Just because the population in Banff has increased from an estimated 47 to 88 individuals (still a small population) doesn't mean the entire provincial population is “thriving”. As mentioned above, we don't even have the data available to be able to compare populations over time in many BMAs. Additionally, grizzly bear recovery planning in the province is far from reassuring.

The first *Alberta Grizzly Bear Recovery Plan* was published in 2008 after Alberta's Endangered Species Conservation Committee recommended that the species be listed as at-risk under the 2002 *Wildlife Act*. Grizzly bears were finally designated as a threatened species in 2010, and the recovery plan was meant to be updated in 2013. The deadline to update the plan came and went, and the next draft of the recovery plan was not released for public comment until 2016, three years after it was scheduled to be replaced. After the public comment period, not a word was heard about the final version of the plan until March 2021, when the finalised recovery plan (dated July 2020) was quietly posted on the Government of Alberta website. At the time of posting, the recovery plan didn't even include the most recent population estimates – which were posted in February 2021.

Not only was the recovery plan eight years behind schedule, but it was largely unchanged from the 2016 draft plan. Some positive aspects to this plan include a commitment to hiring full time human-

bear conflict officers, continuing to monitor bear populations and generate updated population estimates, and a commitment to encouraging population connectivity by creating a buffer around highway 3 and building crossing structures. However, if it takes five years to take a draft plan and publish it, I wonder how many years it will take to implement these actions. Additionally, the recovery plan falls short in several key areas – notably in linear disturbance limits.

The 2008 recovery plan set science-based limits on the amount of linear disturbance (roads, trails, and seismic lines) that should be allowed in core grizzly bear habitat. The 2016 draft and 2020 recovery plan scrapped that idea, and instead set limits on ‘open road density.’ Open roads make up a smaller portion of linear disturbance, so this change will allow more linear features and more human access in grizzly bear habitat. The apparent rationale for this change is a study that indicated that the majority of grizzly bear mortality in Alberta occurred within 500 metres of an open road. This research doesn't take into account any other effects that linear disturbance could have on grizzlies, such as the bears avoiding areas with seismic lines or high trail densities which leads to finding less food or fewer mating opportunities, and a lower overall fitness. Given that the greatest contributor to bear mortality is through human contact, limiting all linear features that people use to access bear country makes sense. This is supported by research conducted in the United States. Changing the linear density limits from all linear disturbance to only open

roads caters to industry and allows further destruction of grizzly habitat.

Speaking of habitat destruction, the recovery plan mentions logging as a potential reason for increasing grizzly bear populations, because of the potential that regenerating cutblocks provide food for bears. A study by Stenhouse et al. (2015) is cited, even though it did not measure the effect of logging on grizzly bear food. This narrative greenwashes our logging industry - convincing the public that logging practices benefit the environment when in fact they do not. Additionally, grizzly bear conservation is not just about grizzlies. Grizzly bears require large amounts of intact habitat to survive, and protecting this habitat benefits the many other species that are equally important to our ecosystems.

Although bear population estimates in some areas are encouraging, we can't yet

assume that grizzly bears are out of the woods, so to speak. One major concern with these estimates is that some trophy hunters may start to push to bring back the grizzly bear hunt in Alberta. The grizzly bear hunt ended in 2006 following the 2002 recommendations of the first committee on the recovery of the grizzly bear.

Mitigating and reducing conflicts between grizzly bears and people is essential to recovery and coexistence. While most people appreciate having a healthy bear population on the landscape, some may also be concerned about increasing conflicts between bears and people. However, a recovering grizzly bear population does not have to mean more conflicts. Successful programs exist throughout the province to reduce the number of negative encounters between people and bears.

One such program is the Carnivores and Communities Program (CACP) of the Waterton Biosphere Reserve. Working in southwestern Alberta since 2009, the CACP focuses on managing attractants in agriculture to reduce conflicts with bears that may lead to euthanasia of the bear, damage to property or livestock, or human safety issues.

Prior to grizzly bears being listed as threatened, some landowners in southwestern Alberta reported seeing more bears on the landscape and experiencing more conflicts with grizzly bears getting into their grain stores, killing livestock or getting into deadstock. This could be because human development and disturbance in bear habitat has led to bears entering agricultural areas in search of food, having been displaced from habitats that they would otherwise occupy. Even though these conflicts exist, Albertans recognise that both people and grizzly bears can have a place on the landscape, which is where the work of the CACP comes in. Some of the projects carried out by this group include securing grain, feed and garbage in bear-proof containers, installing electric fencing, removing deadstock and carcass composting. To date, the CACP has completed over 100 of these attractant management projects – a feat that indicates that Albertans are indeed interested in finding ways to live harmoniously with these impressive creatures that represent a valued part of our province.

Proper reduction and mitigation of conflicts, along with improved management and continued monitoring and research of our province's grizzlies is a path to sustained recovery and maintenance of this species on the landscape. AWA hopes to see more action from the government on grizzly recovery including the implementation of linear disturbance limits in core grizzly habitat. We are encouraged by the steps that have been taken in monitoring and research and the work by groups such as the CACP to lead the way towards healthy coexistence between people and grizzly bears. 🐻



Even without the hunt, humans represent the greatest cause of grizzly bear mortality. Grizzlies who become accustomed to human food, or who come in contact with people, are seen as a hazard and often euthanised. With low population numbers in most BMAs, losing any individual grizzly bear can be a significant blow to the population. Photo © C. Olson

Consequences of Continued Neonicotinoid Use for Songbirds

By Ruiping Luo, AWA Conservation Specialist



Pesticides are common in our everyday lives and one particular group of pesticides, known as neonicotinoids or neonics, have become widely used across the world. Although they were initially hailed for their effectiveness and targeted action, understanding of their risks and damaging effects has since made neonicotinoids a highly controversial topic.

History

Development of neonicotinoids began in the late 1900s, with the first patented neonic, imidacloprid, entering the market in 1990. These pesticides were proclaimed to be selective, targeting insects without harming most larger animals, and were even suggested to kill pests without damaging beneficial insects. They are highly water soluble, easily applied to leaves or soils, meaning a single application could place the pesticide in every part of the plant. In 2014, the market for neonics exceeded US \$3 billion and accounted for 25 percent of the global pesticide market. Pre-treating seeds with neonicotinoids became widespread, and use of the pesticides expanded beyond agricultural use to include garden applications, flea treatments and pest control.

But the first warnings were already emerging. Insect populations began to decline rapidly, and not only in targeted pests. In 2012-2013, massive deaths of bees were reported near neonicotinoid-treated crops, drawing attention to the plight of pollinators. These deaths, and those of many other non-target insects, were soon linked to neonic use. Governments in many countries, including Canada, promised greater regulation and even banning of neonicotinoid use. These promises have yet to be fulfilled.

Songbird Decline

The severe decline in insects is having far-reaching effects as they provide several essential functions in an ecosystem. Insects are the most diverse of all animal groups and involved in everything from decomposition to seed dispersal. They are vital in cycling nutrients and keeping soil fertile, as well as pollination for agriculture and a food source for a variety of birds.

Recently, songbird populations have been in steep decline. In North America, there has been an estimated 30 percent loss since 1970, translating to 2.9 billion breeding adult birds. As many of these disappearing songbirds are insectivores, some of this decline can be attributed to the pesticide-driven deterioration in insect populations and the resulting inadequate food source.

Neonicotinoids can also harm songbirds more directly. Birds mainly come into contact with neonics through feeding on insect prey, which can carry the pesticide in their tissues, or by eating neonic-treated seeds. Neonics are less toxic to birds than to insects but are not harmless. They were found to reduce growth and impair breeding, as well as weakening immune systems and causing birds to be more susceptible to disease. Migrating birds that consumed neonic-treated seeds suffered severe weight loss and delayed departure, which can lower chances of survival, decrease the number of chicks born, and cause long-term population decline.

Regulation and Efficiency

In 2016, amidst mounting evidence against neonicotinoids, Health Canada's Pest Management Regulatory Agency (PMRA) proposed phasing out the agricultural use

of the pesticide. Health Canada released a draft risk assessment for imidacloprid which acknowledged that "Based on currently available information, the continued high-volume use of imidacloprid in agricultural areas is not sustainable." However, in 2021, Health Canada backtracked on an outright ban, only imposing a few new restrictions on neonicotinoid use.

While the ban was debated, the usefulness of the pesticide was brought into question. Research on neonicotinoid benefits in crops found they generally failed to increase production yield. Reports started appearing of resistant insect populations, and the decreasing efficiency of neonic application. Simultaneously, evidence of the danger posed by the pesticide grew. Eighty percent of neonicotinoid seed treatments were found to persist in soils for years and could disperse to and contaminate untreated areas. Repeated and long-term exposure to the pesticide was suggested to adversely affect the health of birds, fish and mammals, including humans. Proof of the consequences of neonic use piled up, while evidence of their benefits remained lacking.

Canada currently has three main neonics approved for use: imidacloprid, clothianidin, and thiamethoxam. PMRA is responsible for their regulation, and directs appropriate uses. In recent years, PMRA has restricted treatment application methods, reduced application rates and times, and increased spray buffer zones. Yet, despite the growing awareness of the risks and the lack of any proven benefit, neonicotinoids continue to be widespread in Canada's agriculture, and Health Canada refuses to impose a real ban. 🐦

Muddying the Waters?

The 'Bounding Box Approach' to Critical Habitat Identification

By Phillip Meintzer, *AWA Conservation Specialist*



The Bounding Box Approach is an unusual new approach developed by Fisheries and Oceans Canada to designate critical habitat for aquatic species at risk. But it is hard to see how it will make any meaningful contribution to species at risk recovery, other than to add one more unnecessary level of complexity, confusion and expense.

According to Canada's *Species at Risk Act* (SARA) critical habitat is "the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the Recovery Strategy or in an action plan for the species." It is a requirement under Section 49 of SARA that the Recovery Strategy and Action Plan for a given species include the identification of that species' critical habitat to the extent possible based on available information. Under SARA, it is illegal to destroy any part of the critical habitat for species at risk, which gives the Government of Canada the power to impose restrictions on human development projects and associated construction activities.

Fisheries and Oceans Canada (DFO) is the ministry responsible for administering SARA for at-risk aquatic species. Despite the requirement for DFO to include the identification of critical habitat for aquatic species at risk, definition of critical habitat is not always easy to understand or implement in practice. This is concerning, because if defining critical habitat is complicated – even for those with a background in fish ecology – then how can we expect project proponents (e.g. logging companies), typically without the required expertise, to behave appropriately or regulate their own operations in aquatic critical habitat?

The SARA recovery strategies for two of Alberta's native cold water trout species – Athabasca rainbow trout and westslope cutthroat trout – include critical habitat definitions with a specific provision which seems to only add confusion or complication. The location of critical habitat for both has been identified using what's bizarrely known as the 'Bounding Box Approach'. This seems to be a DFO-specific approach, not to be found in a broader search of available literature for identifying aquatic critical habitats. According to DFO, the Bounding Box Approach is useful when habitat features and their attributes can be described but their exact location varies yearly or knowledge of their specific location is not available. To identify a particular site as critical habitat, it must be within the 'bounding box' and represent the described functions, features, and attributes within that bounding box as described in the Recovery Strategy. DFO states that it is not possible to identify all specific locations that contain these specific functions, features, and attributes for critical habitat – and that studies will be conducted to address these gaps in their understanding.

If this sounds confusing to you, you're not alone! The Bounding Box Approach seems to indicate that to designate a given area of a watercourse as critical habitat, some form of on-the-ground assessment is required.

As an example, Table 4 of the Athabasca rainbow trout recovery strategy contains a list of locations identified as critical habitat. This includes two locations within Moon Creek, part of the Berland River watershed in west-central Alberta. In addition to being included in Table 4 of the recovery strategy, DFO's aquatic species at risk mapping tool, available on their website, also lists

Moon Creek as containing Athabasca rainbow trout critical habitat. But despite Moon Creek's inclusion as critical habitat in both examples, that doesn't guarantee any protections for critical habitat along the Moon Creek, since – according to the Bounding Box Approach – a field assessment would be necessary to determine the presence of those functions, features, and attributes.

Instead of taking a precautionary approach by designating critical habitat within the entirety of Moon Creek to ensure adequate protections for any potential Athabasca rainbow trout critical habitat, DFO has taken a more complicated – and seemingly weaker – approach. DFO requires project proponents with proposed activities in or near aquatic habitats to identify any critical habitat for aquatic species at risk that may be impacted by their project, but without any enforcement or surveillance mechanisms to ensure completion of a watershed assessment. Implementing the Bounding Box Approach rather than a blanket protection for a watershed means that, to designate critical habitat, a proponent needs to determine the presence of those specific functions, features, and attributes in almost every case, increasing the time and financial cost. However, the lack of enforcement means that proponents could get away without an assessment so long as they never get caught. The Bounding Box Approach enables a hypothetical situation wherein a project proponent could knowingly destroy critical habitat, only to claim that none of the relevant features existed in the first place, prior to the activities which destroyed them.

AWA has reached out to experts for their opinion on the Bounding Box Approach,

including Drew Yewchuck and Shaun Fluker, two lawyers from the University of Calgary, retired aquatic ecologist Dave Mayhood, and Lorne Fitch, a retired fish and wildlife biologist. All four heavily criticised the Bounding Box Approach and were confused as to when, how, and why it came to be used. According to Fluker, the Bounding Box Approach seems to appear in 2019, when the critical habitat description for westslope cutthroat trout suddenly used the term without any prior mention of the concept. There seems to be no peer-reviewed scientific literature for this approach, which has led experts to assume it is a policy concept with no grounding in scientific evidence.

Dave Mayhood agrees that the Bounding Box Approach makes no ecological sense. The approach considers critical habitat as consisting of discrete sites within a watercourse, in which critical life history functions take place at particular times and can move. This ignores the fact that the entire stream is essential to maintaining those discrete sites for their use by at-risk species. Mayhood feels, for example, that it is absurd to treat juvenile rearing habitat as separate from the rest of the stream, especially when the location of this habitat could be constantly changing with changing hydrology. The entire watercourse and upstream watershed should be considered as critical habitat as it is either directly occupied by fish or it indirectly affects the features that are used by fish. Fish populations cannot live with only discrete parts of the stream designated as critical habitat; they need the whole stream, all the time.

Lorne Fitch feels that what is driving the bounding box concept is an assumption that critical habitat moves because trout move as well. This creates a situation where trout occupancy is required for habitat to be designated as critical habitat. Fitch feels that the Bounding Box Approach is an attempt to create the narrowest possible definition of critical habitat to give the illusion that critical habitat is being protected, when that is far from reality. It intentionally muddies those waters by requiring proponents to determine whether or not a stream segment is critical to a specific life-stage of trout on the day of examination. The Bounding



A section of Apetowun Creek near Hinton Alberta. This watercourse is listed in the SARA recovery strategy for Athabasca rainbow trout as an “area within which critical habitat is found”. © P Meintzer

Box Approach seems to be less ecological than it is administrative, relieving DFO of the decision-making responsibility for designating critical habitat themselves, and leaving it up to proponents.

We questioned DFO about the advantages of the Bounding Box Approach during a native trout rehabilitation workshop hosted by Cows & Fish and Trout Unlimited Canada in March 2022. DFO responded that the new approach gives it more flexibility in aquatic environments where we don't always know the exact location of critical habitat. Critical habitat could move from year to year, and DFO didn't want to identify specific locations in one year, when the next year that location might not serve as critical habitat any longer. DFO acknowledged that applying appropriate protection is tricky for aquatic species, but they believe that the Bounding Box Approach provides greater protection for native trout and takes a more 'precautionary' approach than identifying static segments of a watershed.

AWA disagrees that it provides stronger protection for Alberta's at-risk native trout species. Yes, the approach allows different locations within a watercourse to be identified as critical habitat in subsequent years if those features and attributes have moved in the interim. However, all of those functions, features, and attributes would

be protected to a greater degree if the entire watershed was given some form of blanket protection – significantly reducing the time and costs associated with targeted watershed assessments. We are concerned that the Bounding Box Approach has the potential to create added confusion and complexity in the identification of critical habitat for both Athabasca rainbow trout and cutthroat trout. This added complexity will result in increased costs to project proponents, and without adequate enforcement mechanisms in place to guarantee compliance, this will likely lead to the further destruction of the habitat necessary for the survival and recovery of Alberta's imperilled fish.

The present reality of Alberta's several at-risk native trout species is that their historical range has been fragmented to the point where their distribution is now restricted only to short reaches and small streams near the headwaters. These are the locations where trout will make their last stand and every single metre of stream is crucial to their survival. The Bounding Box Approach seems to be informed by administrative convenience rather than scientific rigour and is ill-equipped to provide the protection that a SARA listing requires. A better approach would be to designate the entire length of streams as Critical Habitat which – to trout – it is. 🐟

Wilderness Watch

'Mind the Gap' - Alberta's First Caribou Range Plans Lack Near-Term Habitat Targets, Sideline Indigenous Priorities



Caribou habitat in Alberta's boreal forests and wetland ecosystems has been fragmented and degraded by extensive human access networks and industrial infrastructure, including seismic lines, cutblocks, well sites, roads, trails and pipelines. The combined impacts remove intact connected wetlands and older forest areas that caribou rely upon to minimise encounters with predators.

To avoid a habitat protection order under the federal *Species at Risk Act*, Alberta committed in October 2020 to produce plans providing effective protection for critical habitat in caribou ranges. This includes maintaining enough good habitat (called 'biophysical' habitat) for caribou survival, and attaining at least 65% undisturbed habitat conditions within each range in 50-100 years. To put that figure in perspective, undisturbed caribou habitat is currently only 6% in Bistcho range and 8% in Cold Lake range.

On April 8, the Alberta government released two long-awaited land-use plans for threatened woodland caribou. The plans apply to public lands in the Cold Lake sub-region in northeast Alberta, and the Bistcho Lake sub-region in northwest Alberta. They commit Alberta to track and reduce total land-use surface disturbances from human activities, using sector-specific measures and access management plans. This is a positive and necessary change, but it is nowhere near enough.



Only 6% of the Bistcho caribou range (outlined in black) is considered undisturbed caribou habitat. Alberta's Bistcho Lake and Cold Lake sub-regional plans released April 7, 2022 do not reveal by decade or area how they will achieve required caribou habitat objectives. Map source: Government of Alberta, 2021.

'Draft' plans that circulated for public comment in 2021 did predict and map overall caribou habitat metrics by decade. The 'final' 2022 plans now drop accountability for the overall results. AWA has learned the results have been modelled, but not yet released. Alberta must release these. There are also no forecasts provided for how the combined measures will likely affect overall caribou habitat conditions, for better or worse, in the first 5-10 years and later decades.

The new plans implement 'aggregated' forest harvesting. The Annual Allowable

Cut is maintained with less extensive disturbance, by creating fewer, larger cutblock areas, fewer logging roads that are reclaimed faster, and no return to those areas for 100 years. The fine print suggests salvage logging may occur in fire and beetle disturbed areas or for public safety or ecological concerns as viewed by the forestry minister. There is no transparency on how caribou biophysical habitat is affected by this approach.

Alberta's seismic line restoration program is clearer compared to the draft plans, with targets now set for the first 5, 10 and 20

years. However, in the first decade only 25% of legacy lines will be set on a trajectory towards restoration.

Road management is also weak. In Cold Lake, oil sands lease holders still decide when extensive networks of 'transitional' roads will be phased out, nullifying the benefits of limiting the density of the long-term 'primary' road network. In Bistcho, the future road network can even expand into currently intact areas.

Without transparent predictions of overall habitat conditions, there's no proof the pieces add up to effective protection of critical habitat; disturbance could actually worsen for decades. AWA is very concerned this habitat gap will continue to be filled by Alberta's over-reliance on intensive wolf culls that now occur in Cold Lake and half a dozen other Alberta caribou ranges.

AWA was a member of Bistcho Lake, Cold Lake and Upper Smoky task forces, and is a member of the current Wandering River and Berland task forces. AWA supports a collaborative process of stakeholders and rights holders. Consensus considerations from Bistcho Lake and Cold Lake task forces included exploring an Indigenous Protected and Conserved Area (IPCA) in the Bistcho Lake area and identifying areas valuable to Indigenous people for proposed conservation areas in the Cold Lake sub-region.

However, the sub-regional plans lack meaningful commitments to Indigenous communities, which have identified cumulative land-use impacts in their traditional land infringing on their constitutional rights. "We found that we did not get what we needed and neither did the caribou, because the [Bistcho Lake] plan, at its heart, is a development plan," said Matt Munson, a technician with the Dene Tha' First Nation, in a media interview about the Nation's assessment of the Bistcho Lake plan.

Chief Janvier of Prairie Chipewyan First Nation, whose traditional territories overlap with the Cold Lake sub-region, assessed the Cold Lake plan in an Edmonton Journal column: "Unfortunately, it is vague, plans restoration on very long timescales, and has no meaningful role for Indigenous people — it codifies the status quo," he said. "If, as expected, Alberta uses this plan to lift the moratorium on mineral sales in

the region, the loss of caribou is all but guaranteed." These task force consensus recommendations should have been applied into credible plans for effectively protecting caribou habitat.

AWA recognises the important role of the federal government in the completion of these caribou plans, via the 2020 caribou conservation agreement between Alberta

and Ottawa that avoided a federal habitat protection order. AWA asks the federal ECCC Minister to promptly convey his opinion to Canadians about the extent to which Alberta is effectively protecting caribou critical habitat (or not) with these plans.

- Carolyn Campbell, Conservation Director

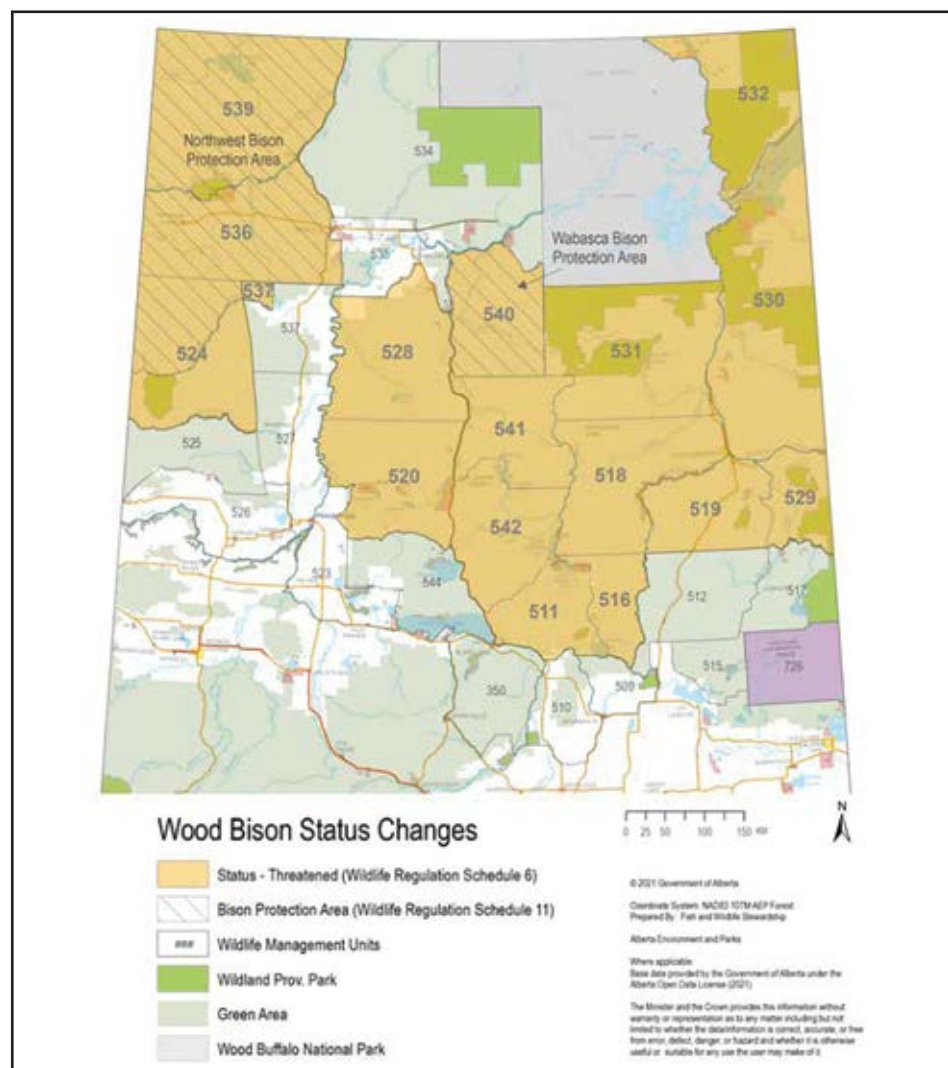
Wood Bison Are Officially Wildlife

In November 2021, the Government of Alberta amended the Wildlife Regulation under the *Alberta Wildlife Act* to finally designate wood bison as a *threatened* species, formally acknowledging wood bison as wildlife for the first time in our province.

Under this amendment, wood bison are

considered *threatened* within specified Wildlife Management Units (WMUs) across the northern part of the province — one of which was newly created under this provision. A threatened listing affords these WMU populations protection from hunting by anyone other than those with Indigenous and/or Treaty hunting rights.

The four WMUs for wood bison and their



Government of Alberta map showing the Wildlife Management Units (WMUs) where wood bison have been designated as Threatened under the revised Wildlife Act Regulation, as well as the two Bison Protection Areas.

associated populations include: Northwest Bison Protection Area (Hay-Zama and Etthithun Lake wood bison populations), Wildlife Management Unit 531 (Ronald Lake wood bison population), Wildlife Management Unit 534 (Wentzel Lake wood bison population), and Wabasca Bison Protection Area (Wabasca wood bison population). The latter WMU was newly formed under this amendment.

We would like to recognise some important contributions made by the Government of Canada leading up to this provincial amendment. In February 2020, Environment and Climate Change Canada (ECCC) released an Imminent Threat Assessment for wood bison in Canada in response to conservation concerns over the Ronald Lake and Wabasca bison herds. The assessment found there is an imminent threat to the recovery of wood bison in Canada, making species recovery objectives highly unlikely or impossible. Threats include the potential for contracting bovine diseases – bovine tuberculosis and brucellosis – from bison within Wood Buffalo National Park, and range loss from industrial development.

The second contribution that played an important role in this status change for wood bison in Alberta was the release of a draft conservation agreement between the Government of Alberta and the

Government of Canada under Section 11 of the *Species at Risk Act*. This was released for public comment between June 25 to August 24, 2021 and was intended to outline roles and responsibilities to protect and conserve the Ronald Lake and Wabasca wood bison herds in Alberta. AWA submitted a comment letter as part of this consultation process supporting the draft conservation agreement, and we are looking forward to the release of the finalised agreement.

AWA is encouraged to see these changes to regulations under Alberta's archaic Wildlife Act and hope they signal renewed intent from the Government of Alberta to pursue meaningful actions in the protection and recovery of wood bison populations. AWA continues to participate in conservation initiatives for wood bison through our membership on the Ronald Lake Bison Herd (RLBH) Cooperative Management Board. The board is a multi-stakeholder entity that exists to advise the Minister of Environment and Parks on matters related to the long-term sustainability of the RLBH, including the sustainability of Indigenous traditional use and cultural connection to the herd. We look forward to providing future updates to AWA members on the board's progress as we work towards the recovery of the RLBH.

—Phillip Meintzer, *Conservation Specialist*

actions. Indigenous knowledge is held at equal weight to western science. Dozens of knowledge holders were involved and each confirmed all the key goals, understandings and direction. Western science included Alberta's data on caribou telemetry locations and habitat disturbance.

The key direction is that three land-use zones are applied to the planning area. At this point, Protection and Restoration zones cover 65 percent of the area, and the Active Management zone covers 35 percent; the Plan will continue to be refined. The Protection zone considers above all else where the caribou and least disturbed areas are now. Elders also emphasised protecting 'muskeg' or peat wetlands, because of the length of time needed to restore them. Restoration zones may have limited development but require development offsets. Active Management zones are more disturbed and consider existing and future industrial tenure.

Each of the four ranges has Protection and Restoration zones. All the herds are recognised as interconnected and deserving of equal priority and protection. The plan also provides for habitat connectivity between these four ranges as well as to other ranges.

Some habitat is assumed to restore naturally; other areas require active restoration treatment. One scenario assumes that within Protected and Restoration zones, all human disturbance except roads, power lines and rail is restored. In that case, Richardson and Red Earth ranges come close to the goal of 80% undisturbed habitat in 40 years. In WSAR, ESAR, further work is needed to restore temporary roads, to aggregate the forestry footprint, and to reduce the permanent road network within Active Management and Restoration zones. Management scenarios also factor in future wildfire occurrence, which Alberta's plans have so far ignored. The values and direction of this Stewardship Plan should provide strong inspiration to guide Alberta caribou recovery and sub-regional land-use planning. For more information, a video link of ACFN-MCFN's April 12 presentation of their Stewardship Plan is available on Alberta Biodiversity Monitoring Institute's caribou ecology and recovery webinar site.

—Carolyn Campbell, *Conservation Director*

Inspiring Stewardship Plan, for Rights, Lands and Caribou

Athabasca Chipewyan First Nation (ACFN) and Mikisew Cree First Nation (MCFN) have developed a land stewardship plan for northeast Alberta boreal woodland caribou. It is far superior to Alberta's own first caribou range plans (profiled elsewhere in this issue). Albertans should champion this Stewardship Plan.

The traditional northern Alberta territories of the two First Nations overlap with four caribou ranges: Richardson, Red Earth, West Side of Athabasca River (WSAR) and East Side of Athabasca River (ESAR). The Nations negotiated a funding agreement with the federal government to develop this Plan.

Indigenous knowledge holders directed

that the Plan's goals should be much stronger than in the federal boreal caribou recovery strategy. Federal requirements are for range plans prepared by provinces that demonstrate progress to achieve at least 65 percent undisturbed habitat per range within 50-100 years. By contrast, Stewardship Plan goals are to reach 80 percent undisturbed habitat in 40 years, with measurable interim goals. The federal habitat targets give caribou only an estimated 60 percent chance of being self-sustaining. The Stewardship Plan targets raise that to an estimated 80 percent probability, making it a much more credible recovery plan.

The Plan's foundation is Indigenous knowledge, laws, and stewardship principles, including incorporation of ACFN and MCFN Treaty rights in caribou recovery

AWA Spring Talks Program

Due to health precautions taken with the ongoing Covid-19 pandemic, AWA's talks program in March and April 2022 took place virtually, via Zoom. This allowed us to reach well beyond the confines of our Calgary-based Cottage School and offices. Once it is safe to gather in person, we plan to continue with a hybrid approach to ensure we continue reaching wider and larger audiences than we have been able to do traditionally.

Our first speaker was Dr. R Kelman (Kel) Wieder, a professor and researcher at Villanova University, who presented on the topic of *Alberta Peatlands – A Valued Resource Under Stress*. AWA is familiar with Dr. Wieder's research through our participation as an environmental representative on the Wetlands Technical Advisory Committee of the Oil Sands Monitoring (OSM) program.

Wieder's talk provided an excellent introduction to the different types of wetlands – marshes, swamps, bogs, and fens – and their distinctiveness. This included learning that peatlands occupy only 3% of our terrestrial surface area but store more than 30% of our terrestrial carbon!

His presentation summarised the current state of human development in Alberta's oilsands region and how development impacts our boreal peatlands. Dr. Wieder's research has focused primarily on how Alberta's boreal peatlands respond to the stresses of oilsands development and recover from wildfires. Unfortunately his work has not continued since 2019 due to both the pandemic and a lack of funding. We are grateful Dr. Wieder was willing to present his important research to AWA members, and we hope to see his work funded again as part of this year's OSM funding cycle.

Dr. Nick Mercer, a self-proclaimed settler-researcher from Dalhousie University's School for Resource and Environmental Studies, presented our second talk, *Advancing Energy Autonomy through Community-Based Research*. Dr. Mercer and his partner Bryn Wood presented remotely from Newfoundland and Labrador with a 3.5-hour time difference from most of our audience here in Alberta.

Dr. Mercer's expertise includes renewable energy policy, the sustainability of off-grid

systems, and participatory approaches to local planning – specifically around energy development. I have a personal connection to Nick, knowing him through various mutual connections from Newfoundland and Labrador, and we thought his experience with energy sovereignty in remote communities would be applicable here in Alberta.

Dr. Mercer discussed his partnership with the NunatuKavut Community Council, a regional Inuit government representing the southern portion of Labrador. The talk provided excellent background on the current state of off-grid electricity in Canada, where 190 predominantly Indigenous communities remain heavily dependent on diesel fuel for heat and power. His presentation highlighted the current global trends towards renewable energy in the fight against climate change, and the startling lack of evidence on how Indigenous Peoples themselves experience and envision energy sustainability in off-grid communities.

For over five years, Nick has participated in a community-based research partnership with the NunatuKavut Community Council to better understand Indigenous needs for sustainable energy development. Their unique approach to participatory planning seeks to centre community rights, Indigenous Knowledge Systems, and local needs to decolonize the process of decarbonisation in Canada.

Our third talk featured Dr. Kevin Timoney on his new book *Hidden Scourge: Exposing the Truth About Fossil Fuel Industry Spills* (see Book Review below). Timoney's presentation – in conjunction with his book – discussed

his analysis of more than 100,000 spills by the fossil fuel industry across Alberta, Saskatchewan, Montana, and North Dakota. His analysis addressed a diverse range of key issues such as misinformation shared by oil and gas corporations, misreported or under-reported data, and 'regulatory capture' of the Alberta Energy Regulator (AER) by energy interests.

Regulatory capture is a quasi-legal phenomenon which occurs when a regulatory body or agency that exists to make decisions in the public interest (i.e. AER) is coerced into acting in favour of private interests within the industry it is charged with regulating (i.e. the fossil fuel industry).

Timoney's talk was full of striking visuals that helped to communicate the massive scale of oil and gas infrastructure and spill locations across our province and country. Seeing the geographic extent of the problem helps to contextualize how much work needs to be done if reclamation eventually takes place. With a development footprint of more than 30,000 km², and an estimated cleanup bill greater than \$260 billion, Timoney believes that we should not allow the creation of new fossil fuel infrastructure until our current problem has been addressed.

We are grateful that Timoney was available to present his research and analysis to our guests that evening, and we hope that anyone who is interested to learn more about his work will seek out a copy of *Hidden Scourge* for themselves.

- Phillip Meintzer



McClelland Lake Wetland Complex in northern Alberta has peat-dominant wetlands vital for carbon storage in the fight against climate change. Photo © AWA

Readers' Corner

Hidden Scourge: Exposing the Truth about Fossil Fuel Industry Spills - Dr. Kevin P. Timoney

By Jim McPhail



Do you enjoy a pleasant read at bedtime to ease you to a peaceful sleep? *Hidden Scourge* is NOT one of those books! As the book's title suggests, you are in for a deep-diving investigative book, one which will roil your guts with fear, shock and outrage. It requires knowledge of sciences, statistics, governance, information management, history, and policy and covers two provinces, one territory and two states. Dr. Timoney is a senior ecologist, living in Alberta. His award-winning book *The Peace-Athabasca Delta: Portrait of a Dynamic Ecosystem*, established his bona fides for science and scholarly writing. It focuses in part on how exploiting Alberta tar sands has damaged the ecosystem.

Timoney's youth in the New Jersey Pine Barrens gave him early experience with the dubious practices of Ciba chemical company, and he draws a direct parallel between his Pine Barrens experience and what the fossil fuel industry and allies have done in Alberta with respect to industrial spills. He describes how they placed profit ahead of public and environmental harm, communicated deceptively, and ignored public concerns, revealing a web of enmeshed relationships between oil and gas companies, regulators, governments and politicians.

Timoney's research was sparked by an

impossibility reported in Alberta Energy Regulator (AER) data – 100% success rate in cleaning up tens of thousands of spills. A host of concerns flowed from this discovery. One of them was accuracy. Timoney's search for accurate data was difficult. His journey took him through a maze of missing and hidden data, misinformation, inaccurate and incomplete documentation, and determined delays and walls by industry and its partners. He evaluates the veracity of corporate and regulatory reporting using peer-reviewed scientific data, field observations, documents obtained under freedom of information requests, and his own interviews. Sometimes industry and government data themselves support his interrogation of the accepted record.

His persistent data-mining revealed one inconsistency after another. The data in the database are supplied by industry, not by an independent body concerned with ecological integrity, Indigenous rights, human health or deleterious economic effects to the public. The regulator does not monitor environmental changes at spill sites nor require proof by industry of environmental effects/harm or effective remediation. Other facilities such as pipelines, well pads, and seismic lines have parallel ecological effects. Abandoned oil wells are seldom monitored, leading to unknown health and climate effects.

Timoney further highlights poor public participation and information. Efforts to protect the environment are blocked and deflected by consistent denials and obfuscation by companies and regulators. Self-serving press releases by a regulator that appears to be captured by industry extol its environmental protection. Lack of acknowledgement of environmental damage appears deliberate, as is the refusal to admit their mistakes. The accuracy of information is compromised by the long list of institutions that are allied with industry – educational institutions, media, consultants, all

levels of government and think tanks. Industry helps finance their supporters and regulatory independence appears damaged by the personnel revolving door between industry and government.

Timoney's account stirred personal memories in me. There was the occasion, for example, where a former regulatory official offered advice to me and other conference delegates about how he could assist business in smoothing the permit process, blocking public access, and providing advance notice of opportunities to craft regulatory policies.

The equation detailed in Timoney's book should be regarded as unsettling. Spills and deliberate releases are met with regulatory permissiveness and this combination of blindness and inaction creates enormous environmental, economic, and social issues. The AER figures notably and we learn that most environmental impact studies on the Fossil Fuel industry are funded and directed by the industry. Thankfully, Timoney has proposals that would establish a more appropriate regulatory balance, including replacing the current regulator with one capable of, and intent on, monitoring industry practices and ensuring full, long-term remediation for any spills and other harmful practices. Monitoring would be conducted by the new body. Strong financial penalties would be established for offenders.

My sceptical self was ready for all that Timoney revealed but my heart was torn as I read about the deliberate and colossal extent of the problems he identifies. The author's work should be lauded; it's a critical, if unsettling, cornerstone needed to build a better Alberta for the next generation.

Jim is a collaborative and supportive leader who generously offers his time and expertise for environmental causes. He is a member of AWA and has been a tremendous supporter, notably in the work to defend Grassy Mountain from coal mining.

Martha Kostuch Annual Lecture - Modern Day Rebels Christyann Olson, Wilderness Defender

By Nigel Douglas

If there is one thing AWA has become known for, it is the agility to respond to a rapidly changing world, and the 2021 Martha Kostuch Annual Lecture was no exception. Unable to host a traditional face-to-face lecture because of Covid regulations, this year's lecture and awards were held online, with AWA supporters in Alberta and beyond joining from the comfort of their own homes.

There have been some incredibly deserving recipients of AWA's Wilderness Defenders award since it was first given in 2001, but none could be considered more worthy than this year's recipient, outgoing AWA Executive Director Christyann Olson. Christyann joined AWA board members and past presidents Cliff Wallis and Vivian Pharis for an informal look back at her long involvement with AWA, which culminated in her appointment as executive director in 2000.

Christyann paid tribute to the early AWA pioneers who set the tone for so much that was to come; characters such as Dick Pharis, William Michalsky, Floyd Stromstedt, and Steve Dixon all preceded her as Wilderness Defenders Award recipients. "They were rebels," said Christyann. "They pulled away from the Alberta Fish and Game Association, because their mandate really didn't include the direct action that was needed."

From these rebellious roots, AWA began. "AWA was feisty," she said. "Those rebels set the stage for 56 years."

AWA's early successes, including protection of the White Goat, Siffleur, South Ghost and Willmore Wilderness, have been followed by many notable achievements under Christyann's tenure, though she clearly struggled a little when asked to narrow it down to just ten highlights of her time with AWA.

1. Hillhurst Cottage School. AWA had been leasing this grand old 1910 school from the City of Calgary since the 1970s, so when in 2012 the City decided to sell the building, AWA's future suddenly looked uncertain. Christyann, of course, looked on this as an opportunity. With the help of board members, she set out to convince the City to sell the building to AWA, and then



A favourite prairie wild space, one Christyann defended and fought for through the years; a battle that was won at least in part because the company proposing to drill went bankrupt! Photo © D. Olson

to raise the considerable funds required to provide AWA with a permanent home. Thanks to more than 500 donors, AWA raised sufficient funds to secure the building's long-term future. "On June 25 2015 we celebrated AWA's fiftieth year with dignitaries including Mayor Nenshi," remembers Christyann. "One of my best memories of that celebration is neighbourhood kids that came with their lemonade stand money and a great big group hug!"

2. Wild Spaces Map. Thanks to a collaborative effort from staff and volunteers, the updated 2002 version of AWA's Wild Spaces map took a big step forward in providing the level of detail and complexity that Alberta's wild spaces deserved. "We needed detail, we needed on-the-ground research and information to know if an area had the potential to be part of our protected areas network," remembered Christyann. That revised 2002 map won an award at the City of Calgary's GIS competition. As the technology improved, the 2019 version of the map included an inter-active online version.

3. Climb for Wilderness. For 25 years, the annual climb at the Calgary Tower was AWA's primary fund-raising and awareness-raising event, involving more than 1000 climbers, and armies of volunteers. It grew to include the annual Run for Wilderness, an environment fair, and more than 100 murals painted by AWA supporters "to help people to learn more about Alberta's wild spaces." When the Calgary Tower was no longer available, the event simply upped and moved

to the Bow Tower (though for Christyann it was by no means simple!).

In 2019, it became apparent the Bow Tower would no longer be offered as a venue, AWA once again showed its nimbleness and moved to develop the Adventures for Wilderness program. Following an established tradition, the program "depends on volunteers, on being out there enjoying wild spaces," said Christyann, though now it is "far away from staircases inside buildings!"

4. Oldman Dam. In the late 1980s, plans to build the \$350-million Oldman Dam were opposed by a huge alliance of environmental groups, residents and First Nations representatives. "The rebels were called upon once again," recalled Christyann. "We went door to door seeking signatures on petitions to stop the dam." AWA helped to organise a concert with Ian Tyson and Gordon Lightfoot, attended by almost 8,000 people. "People were inspired to care," said Christyann, and indeed more than \$20,000 in donations was raised that day. Although the Oldman Dam went ahead anyway, perhaps AWA can take some credit for the fact that no more dams on that scale have been built since.

5. Working with industry. AWA and Shell Canada went head-to-head in the late 1980s, culminating in protests against proposed gas wells on top of Corner Mountain (Prairie Bluff) in the Castle and even an injunction served on Vivian and other board members by Shell Canada. Shell ignored AWA's arguments that new developments in directional drilling meant the gas fields could

be easily accessed without the need for access infrastructure, or destructive wells on top of the mountain.

Early on in her tenure as Executive Director, Christyann and AWA's board agreed to meet with Shell to talk about restoration work in the Waterton field. Over time those meetings continued to develop, resulting in greatly improved working relations. "This helped ensure that best decisions – including expensive ones like buried power lines and avoiding stream crossings – were put in place to minimise environmental damage," pointed out Christyann.

6. The Castle. "In 2015, 50 years after AWA's inception, the birthplace of AWA was finally given... some protection," remembered Christyann. She paid tribute, once again, to the countless individuals who played their part over the years. "Modern day rebels like Gord Peterson, Rick Collier, Sid Marty, Mike Judd, Peter Sherrington and so many others deserve recognition for taking a stand against logging in Castle," she said. "On their behalf we are grateful for the Castle Wildland Park and Castle Provincial Park."

As is so often the case, the work isn't done. "The fine print really matters and to this day we are still waiting for the promised protection to be enacted by removing off-Highway vehicles from critical westslope cutthroat trout habitat," she emphasised.

7. The Bighorn. "Through the years, so many of us have worked to see the Bighorn protected," said Christyann. This is a fight that AWA has still not won, so the work continues. "The Bighorn is a real jewel and we still hope we will see real protection," she stressed.



Christyann with Nigel Douglas and our bear mascot - protesting the Spring Grizzly Bear Hunt on the steps of the legislature in Edmonton. Photo © AWA



Christyann celebrating the twinning of Hay-Zama Lakes Wildland Provincial Park with the Dalai Lakes Wildland in Inner Mongolia. Picture second from right is Bu Tegan, director of the Dalai Lakes National Nature Reserve Management. Photo: © S. Nichols

Christyann talked about some of the many projects that AWA has been involved with in the Bighorn, including garbage-clearance expeditions, trail maintenance trips on the Bighorn Historic Trail and AWA's Bighorn book. Not to mention AWA's innovative Bighorn trail-monitoring project, described by Christyann as "a 20-year project to look at damage that would be done to trails authorised for motorised use." Data from AWA's work proves that "there are places too fragile to have motorised recreation allowed."

8. Grizzlies. "In 2006, another great success was helping to have the spring grizzly bear hunt stopped," Christyann recalls, remembering the award-winning media campaign created by AWA board member Frank Calder and his team. But, as is so often the case, even when AWA secures a win, battles may have to be fought again. "We'll need to be vigilant and base our arguments on the best science available to make sure we keep grizzlies in wild spaces in the years to come."

9. Sage grouse. Christyann recalls being "horrified with the lack of urgency to stop the extirpation that sage-grouse were facing in 2012." Always looking for new ways to make its case, AWA held an emergency summit of scientists and other experts, and the resulting communique started the ball rolling towards protection of these critically-endangered birds. "Using the last tool in our tool kit, we went to court and forced the federal environment

minister to produce an emergency protection order," she explained, describing it as "the slowest emergency ever."

"Greater sage-grouse are not out of trouble yet," she pointed out. "Some progress has been made in removing infrastructure and orphan wells in primary habitat." With the help of privately-conserved land, there is a chance, but we need to do more to protect critical habitat on public land.

10. Hay Zama. Cliff described the "long, sordid story" of AWA's involvement in Hay Zama. "The indigenous people of the Dene Tha' stood firm, they were so supportive of protection in their homelands, and we were happy to help in any way," said Cliff. He went on to describe AWA's work in the twinning of Hay-Zama Lakes Wildland Provincial Park with the Dalai Lakes Wildland in Inner Mongolia. Both are important Ramsar wetlands with minority indigenous populations. Christyann concurred, referring to a "story of cooperation and collaboration, of convincing decision makers, and working with indigenous peoples."

Christyann finished her lecture with a toast to Wild Alberta. "May we celebrate the legacy we have, that we will leave for our children and for theirs. May we all have the wisdom to care enough to make a difference for wilderness, wildlife and wild water."

Nigel Douglas is a former AWA Conservation Specialist now living and working in the UK's version of Wilderness.

Adventures for Wilderness



From April 29 to May 2, cities around the world participated in the 2022 City Nature Challenge (CNC). This annual event celebrates biodiversity and encourages people to get out and explore their own backyards while contributing valuable ecological data through citizen science.

The CNC was founded in 2016 as a competition between Los Angeles and San Francisco to see which city could identify the most biodiversity using the iNaturalist app. Since then, it has grown into an annual worldwide event and as of 2020, there were 244 participating cities. Participating cities in Alberta include Lethbridge, Calgary, Red Deer and Edmonton.

Citizen science can be defined as 'participatory scientific research conducted in whole or in part by amateur scientists.' Basically, it is science done by people like you and me. Through data collection apps like iNaturalist and eBird, people can contribute important information about biodiversity by simply recording observations while they're out enjoying nature. This data is then used by scientists (professionals this time), to help understand biological

patterns and trends on a broader scale.

The 2022 CNC was the theme of two recent Adventure for Wilderness activities that took place on April 30 and May 1. Participants learned all about the benefits of citizen science and put it into action by making their own observations through iNaturalist.

The first day took us to Frank Lake, just east of High River. There was no shortage of highlights as we walked towards the popular viewing blind at the north end of basin 1. We made sure to tread carefully and stick to well-trodden trails far away from the shoreline to avoid the spread of avian flu which has recently been an issue in Alberta and much of Western Canada. We were happy to see most other visitors also acting conscientiously but disappointed that many others were blazing their own trails close to shore and through delicate nesting areas.

Our group succeeded in identifying over 25 species of birds, including three western meadowlarks and two white-faced ibises. We even stumbled upon a recently deceased striped skunk and were stumped as to what caused its demise.

All in all, our groups contributed nearly 70 observations of flora and fauna over two days. This was just a small part of the thousands of observations that formed a part of Calgary's contribution to the 2022 CNC which was one of the top three cities in Canada for most observations, alongside Victoria and Montreal. This is thanks in large part to efforts of Matt Wallace, a naturalist in Calgary who has been coordinating CNC events in the city for years.

Even if you missed the 2022 CNC, the opportunity to contribute to citizen science lasts all year round no matter where in Alberta, Canada or the world you might find yourself. By downloading apps like iNaturalist, eBird and others, you can make a meaningful contribution to scientific research while you're out enjoying your nature excursions. So, the next time you're thinking of heading out, no matter how far afield, don't forget to download one of these apps and start your role as a citizen scientist.


- By Nathaniel Schmidt



Day two of the Adventure found us at the Ann and Sandy Cross Conservation area just west of Calgary. Birds were the theme of the day and we were excited to spot what was for all, the first yellow-rumped warbler of the season. Our group also managed to record observations of fungi, lichens, mosses and a few species of early wildflowers poking through the ground (no crocuses though!). Photo © N. Schmidt

**A few of our upcoming *Adventures for Wilderness* -
Check out the website for more!**

www.AdventuresForWilderness.ca



**Jul. 2&3 - Bikepacking
the Cowboy Trail**

**Aug. 27 - Orphan Oil & Gas Wells
and Foothills Geology**

**Aug. 17 - Hiking into the Headwaters
of Meadow Creek**



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Canadian Addresses to:



AWA
Alberta Wilderness Association
455-12 ST NW
Calgary, Alberta T2N 1Y9
awa@abwild.ca

PM 40065626



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