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A WILDLANDS ADVOCATE

THE ALBERTA WILDERNESS ASSOCIATION JOURNAL



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Great Gray Owl
PHOTO: © R. TAYLOR

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COVER PHOTO

Robert Taylor took this amazing photo of a Great Gray Owl in eastern Manitoba. In more than forty years and thousands of Great Gray Owl photographs this is one of his favourites.

FEATURED ARTIST

This month AWA is very pleased to feature the wildlife sculptures of Canmore artist Tom Hjorleifson. The Rocky Mountain wilderness inspires Tom's bronze and clay sculptures. His personal encounters with wildlife have evoked a deep passion and a desire to capture the magic of those moments. He also hopes his work helps support the importance of the environmental movement.

By building several originals simultaneously he compares one against another. This process allows him to investigate how a rigid material can convey fluidity of motion. Often he mounts a swivel in the base of his finished work to invite interaction with the viewer, creating interplay between perspective and light. The anticipation of movement, draws the admirer in, recreating the thrill of an encounter with Canada's breath-taking wildlife.

For Tom creating art is a compelling process and an irresistible journey. His creations may be seen on his website www.tomhjorleifson.com where you can also find links to the seven galleries in Alberta, British Columbia and Montana that feature his work.

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WILDLIFE IN ALBERTA

Growing up in the Kootenays in southeastern B.C. you might not think that I would have many memories of wildlife in Alberta. On the contrary, some of my most vivid memories and most anticipated moments in those pre-adolescent years revolved around Alberta's wildlife. My father was a bird hunter and each fall he would devote some of the few vacation days he was able to take to go bird hunting with family friends who lived near Lomond. I got to skip school and serve as the hunting party's two-legged bird dog. Those crisp fall days were some of the best I have ever spent. The ponds and dugouts were black with waterfowl and the hedgerows and grain bins were home and diner to pheasants and Hungarian partridge.

I didn't realize it at the time, mind you neither did many of the adults who were running the show, that human intervention was crucial to the presence and health of those wildlife populations. There's a good reason the gray partridge is called a Hungarian, not a prairie, partridge. It hails from Europe and western Asia and was introduced to Alberta in 1908; pheasants too are an exotic/alien species brought to

Alberta in that same year. When the pheasant hunting started its long, steep decline in the 1960s a host of our actions and innovations, such as changing farming practices and the dramatic increase in pesticides and herbicides, affected the landscape and the prairie ecosystem in ways that reduced their ability to survive.

This issue of the Wild Lands Advocate focuses much of your attention on wildlife issues in Alberta. The articles demonstrate well that, in a sense, not much has changed from forty years ago. If anything, due to industrialization, the landscape/wildlife link is even tighter today than it was then. As Mark Boyce's lament for the sage-grouse underlines emphatically oil and gas activity on Alberta's remaining native prairie grasslands is one vital factor pushing this prairie native to extirpation here. Lorne Fitch makes a similar point in his analysis of the state of westslope cutthroat trout. But he also notes how the future of the cutthroat may be compromised by earlier decisions to introduce non-native fish species to Alberta waters.

The state of knowledge represents a major difference, a potentially very positive one, between now and the days when I used to chase pheasants and partridges. Decision makers know how influential we are when it comes to the future of our wildlife and the integrity of the landscapes they depend on. We have a much better appreciation, as Jill Hockaday notes in her discussion of swift fox recovery efforts, just how essential secure, healthy landscapes are for Alberta's wildlife. We know, as government officials attest to in Nigel Douglas's article on Potatogate, that maintaining native grasslands will benefit species-at-risk and other wildlife populations.

But, knowledge alone never guarantees legal or policy change. This issue's Wilderness Watch updates on caribou and grizzlies remind us of that. Knowing those species are in dire straits in Alberta only will matter if we can build political coalitions able to impress Alberta's political class that acting on that knowledge offers political benefits. To that end keep your eyes open during any Easter Egg hunts you participate in this year for the progressive members of our provincial community. Court them. Convince them that, without real progress on wildlife issues here, their future, like some of the species considered in these pages, is likely to end with extirpation.

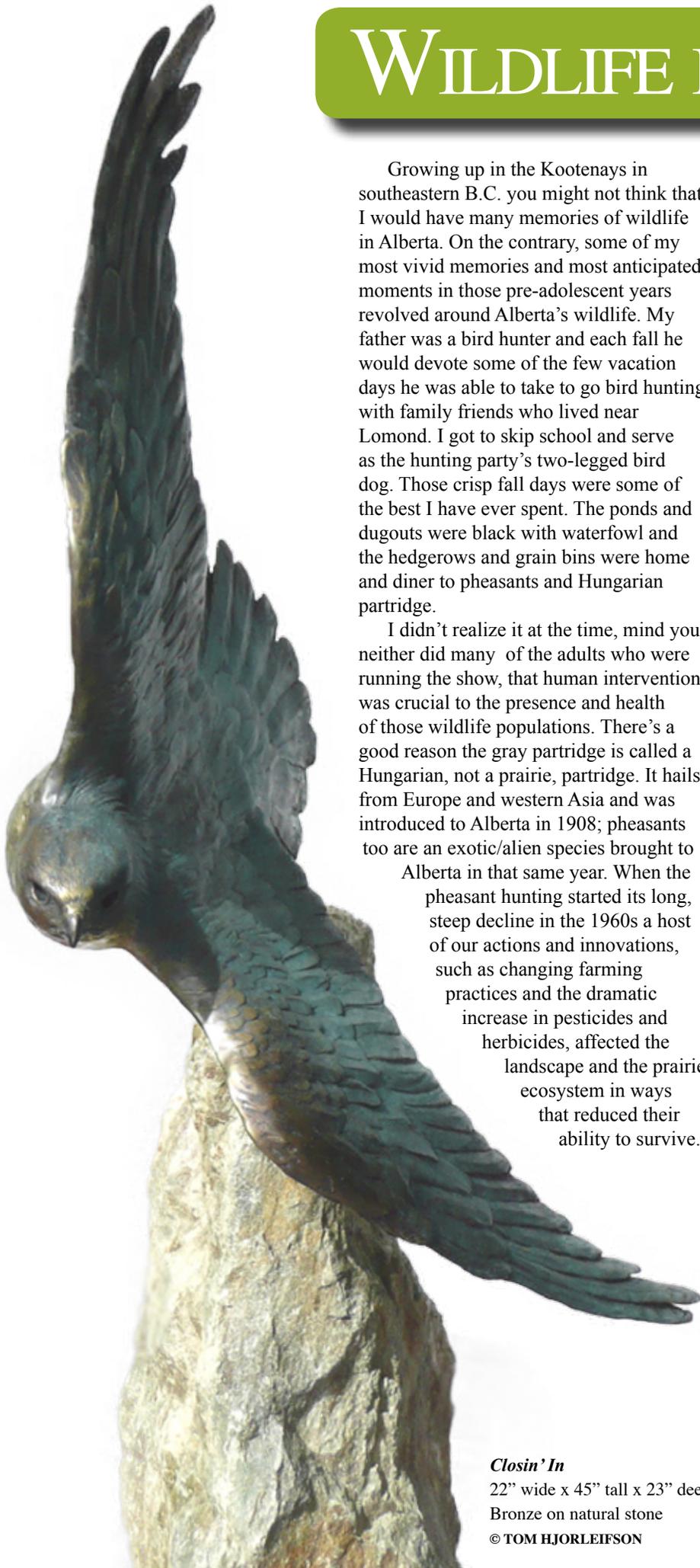
Closin' In

22" wide x 45" tall x 23" deep

Bronze on natural stone

© TOM HJORLEIFSON

- Ian Urquhart, Editor



Rapid Decline of the Greater Sage-Grouse in Alberta

By Dr. Mark S. Boyce



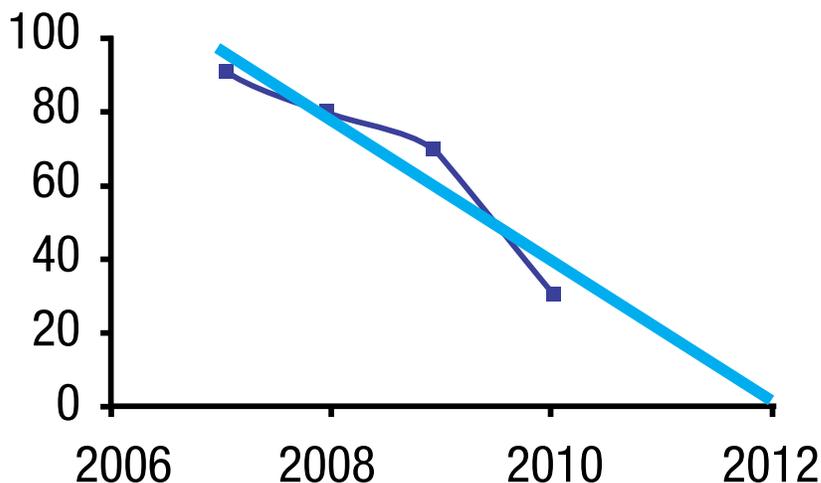
The Greater sage-grouse (*Centrocercus urophasianus*) is one of a number of species with a distribution primarily south of the border extending into southern Canada. Populations further south in the United States are more secure but at the northern extent of their distribution the species is desperately endangered. We've already lost sage-grouse from British Columbia even after a failed attempt to reintroduce them. And they're quickly on their way out in Alberta (see Fig 1). Counts last spring revealed only 31 males in southeastern Alberta. What the male count means for the total population in Alberta is not known precisely; it probably means it is hovering between 60 and 90 birds. A few more sage-grouse occur in Saskatchewan but the population there is still fewer than 100 birds.

The observed decline in abundance was fairly easy to predict given the rapid and extensive oil and gas development taking place throughout their core habitats in the vicinity of Manyberries in southeastern Alberta. The Greater sage-grouse is highly sensitive to disturbance, and in a recent study of winter habitat

selection in Alberta we found strong avoidance of gas wells and associated developments (Carpenter et al. 2010). We also have conducted studies of brood-rearing (Aldridge and Boyce 2008) and nesting habitats (Aldridge and Boyce 2007) giving us a full annual cycle of habitat requirements for the birds. The

species is linked strictly to sagebrush steppe habitats and during winter the Greater sage-grouse feeds exclusively on the leaves of sagebrush. Remarkably they are able to gain weight on this restricted diet. Females almost always select a nest site underneath the canopy of a sagebrush plant. To avoid predation by raptors, the

Figure 1. Maximum counts of Greater Sage-Grouse males on leks (strutting grounds) in Alberta during 2007-2010. The straight line is a trajectory of decline suggesting extirpation in 2012 if the population maintains the same decline.





“Although the species has been listed as endangered for many years, little has been done to eliminate human disturbance in critical habitat.”

birds are superbly camouflaged amongst the sagebrush plants.

Despite the evidence offered in our habitat studies and several other sage-grouse habitat studies conducted in the United States, Environment Canada failed to identify critical habitat for the Greater sage-grouse in 2008 when the first draft of the federal recovery plan was published. In July 2009 the Federal Court of Canada, in *Alberta Wilderness Association v. Minister of Environment*, ruled that our analysis was sufficient to identify critical habitat as defined by the *Species at Risk Act*. In this case (where AWA was joined by Federation of Alberta Naturalists, Grasslands Naturalists, Nature Saskatchewan and Western Canada Wilderness Committee) Justice Zinn ruled that the critical habitat section of the government’s recovery strategy ought to be struck out and redrafted by Environment Canada. That September Justice Zinn issued a supplementary ruling requiring Environment Canada to make two substantive changes to its critical habitat section. First, the government was ordered to identify all known active leks (communal breeding

grounds) in Alberta and Saskatchewan as critical habitat; second, the source habitat (attractive, low-risk nesting and brood rearing habitat) we identified in the Manyberries area also be identified as critical habitat. The recovery plan needed to generate maps of all critical habitat for the species in both Alberta and Saskatchewan.

Although the species has been listed as endangered for many years, little has been done to eliminate human disturbance in critical habitat. A recent Alberta government report notes that within a 3.2 km radius of lek sites the province has allowed the construction of 4.6 wells/km² and 1.7 of these are active producing wells. Critical habitat is not necessarily tied to lek sites but these numbers reveal the extensive development that has been approved and is underway in the restricted range of the Greater sage-grouse. Additional habitats have been lost to agricultural development, but the most extensive disturbance in Greater sage-grouse range in southeastern Alberta is for natural gas. The habitat disturbance from natural gas development involves

the well sites themselves and also the roads that service these wells. These roads fragment sagebrush habitat into small pieces. Also, active wells require electricity which usually means that there will be powerlines and power poles providing perches for raptors, such as Golden Eagles (*Aquila chrysaetos*), that prey effectively on the grouse.

The provincial government has proposed to supplement the Alberta population with birds from northern Montana (Suitor et al. 2010). It’s crucially important that these birds come from the silver sagebrush (*Artemisia cana*) range, as has been proposed, to ensure that the birds are from similar habitats. Although Alberta’s sage-grouse have retained most of the genetic variability that occurs in the species (Bush et al. 2010, 2011), this does not preclude local adaptation to silver sagebrush such that translocations from big sagebrush (*A. tridentata*) areas might be counter productive. But, the entire exercise might be futile anyway given that there is very little undisturbed habitat remaining and the little that does remain continues to be eroded. Indeed,



Sage-grouse

PHOTO: © GARY KRAMER,
U.S. FISH AND WILDLIFE SERVICE

the species is not doing well anywhere in its range, and it would seem a tragic loss of birds to release them on a landscape that we've already made unsuitable.

Staff from Alberta's Fish and Wildlife Division have been meeting with oil and gas companies trying to convince them that they should adopt operations that have minimal effect on sage-grouse (Suitor et al. 2010). But this falls far short of regulations that mandate that surface disturbance be kept out of the small bits of critical habitat that remain. And the disturbance to sagebrush plants and other vegetation that has already happened means that the sage-grouse habitats will require many years to recover even if they are protected strictly.

I fear that it might be too late already for this spectacular bird in Alberta. Habitat protection and restoration are most crucial to ensuring its persistence in Alberta. No translocation or conservation program can be successful without a total ban on future development and disturbance in critical habitat for Greater sage-grouse. Suitor et al. (2010) make the very dubious claim that sage-grouse habitats are improving in Alberta. Nothing, from my reading of the literature and experience in the field, could be further from the truth. The provincial government urgently needs to take real and meaningful action such as protective notations on any oil and gas leases in critical sage-grouse habitat. 🐦

Dr. Mark Boyce is Professor and Alberta Conservation Association Chair in Fisheries and Wildlife at the University of Alberta.

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A Cutthroat We Should Respect

By Lorne Fitch, P. Biol.



Why *Oncorhynchus clarkii lewisi* is called a “cutthroat”

PHOTO: © S. PETRY

Consider Alberta’s poor westslope cutthroat trout. First, it exists on the Eastern Slopes of the Rocky Mountains, confusing the uninitiated with an apparent geographic oxymoron. Second, the adjective “cutthroat” conjures up images of violent piscine criminals who behave ruthlessly. Lastly, most of these fish slipped from our grasp over an indeterminate period of not more than 70 years. So few are left that a weighty group of experts uses the term

“threatened” to express their impaired status in Alberta. Maybe we should add the word “extinguished” to the list of terms in an act of honesty and clarity. When the population in much of the Bow River watershed is down to about 5 percent of its former range it would seem the answer would be both intuitive and obvious.

The trout is called a “cutthroat,” not for its personality or behaviour, but rather for the brilliant vermillion/orange slashes

on the underside of its jaw. “Westslope,” a descriptor of the species of cutthroat, is from the geographic location where the fish was first found and described. The westslope cutthroat trout is one of several branches of the cutthroat genealogical tree.

The westslope cutthroat trout crossed the continental divide into Alberta over 10,000 years ago during the period of glacial retreat. The eastward migration had to wait for the Cordilleran ice

sheet, covering the mountains, and the Laurentide one, covering the plains, to begin to melt. Cutthroat trout probably swam across the low points, like the Crowstest Pass, during times when glacial lakes formed on the east side of the continental divide and brought water levels up so the flow pattern was to the west. Glacial refuges for fish existed in the Columbia watershed and in the Missouri/Mississippi watershed. The cutthroat's passage to Alberta is an epic journey in its own right. Cutthroat trout made a home in the Bow and Oldman watersheds along the Eastern Slopes of southwestern Alberta.

Westslope cutthroat trout were probably first noted by Lewis and Clark, the intrepid American explorers, based on fish caught (and eaten) on June 13, 1805 at what would later become Great Falls, Montana. The Latin designation for westslope cutthroat trout honours both explorers with its name - *Oncorhynchus clarkii lewisi* - despite the fact they ate the first specimens they caught. That's what people did with cutthroat trout – ate them, lots of them

In June 1876, amidst the dust and confusion swirling over the Little Bighorn battlefield, George Armstrong Custer undoubtedly had a few final thoughts. Fishing for cutthroat trout

probably was not among them. But, you couldn't have blamed him for wishing he was fishing with his commander, General George Crook, in the Tongue River watershed not far south of the Little Bighorn. There Custer could have been on the delivering end of a "massacre." Crook and his few troops bivouacked for about a week there and caught at least 10,000, perhaps closer to 30,000, cutthroat trout.

From the treasure trove that is the photography archives of the Glenbow Museum comes a grainy black and white image of three anglers near the mouth of Willow Creek, near Fort McLeod, taken in 1902. They look pleased with themselves, as they should, burdened down with a stringer of cutthroat trout that must have weighed over 20 kilograms. This photo gives us a window on not only cutthroat abundance but also on their wide distribution far into the plains. Unfortunately, no one has seen, or remembers, a cutthroat in the lower reaches of Willow Creek for decades.

A breezy little article from the *Calgary Herald* in 1903 reported that two anglers caught 400 cutthroat trout from Fish Creek in a day. Maybe that's how Fish Creek got its name. Today the stream barely warrants its name.

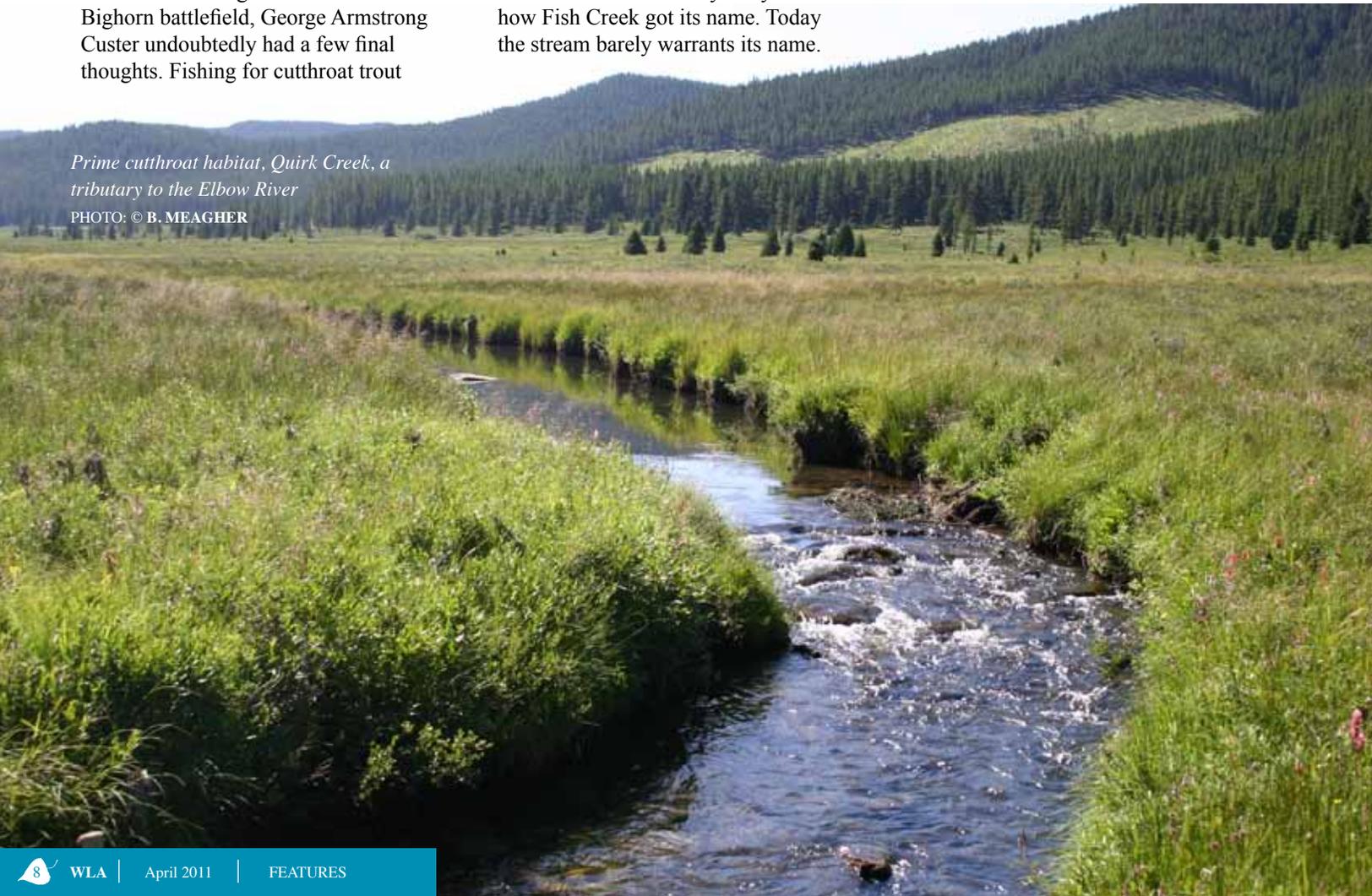
Nose Creek, the channelized drain that parallels Highway 2 and runs through Airdrie, was once a trout stream. Today, as it intermittently flows through a tangle of industrial and residential lands people are surprised to learn it is a stream.

In fairness we might apply the term "massacre" to what has happened to Alberta's westslope cutthroat trout and to the landscape that produced them. This massacre though has played out over decades. The additive weight of ignorance, apathy, greed and time took decades to produce this devastating result. As humans our memories are somewhat imperfect, not only related to birthdays and anniversaries, but also to change. One day we step in front of the bathroom mirror and we're old. When did the change happen we wonder? It happens slowly, insidiously and cumulatively and so it is as well for landscapes and fish habitat. Given time and multiple events cutthroat have disappeared from many streams and, sadly, from our consciousness.

Fishing wasn't the only activity occurring on the landscape that would become Alberta. Logging, as a major landuse was

Prime cutthroat habitat, Quirk Creek, a tributary to the Elbow River

PHOTO: © B. MEAGHER



established by the late 1880s. Rivers were used to transport raw logs to sawmills, one being the Eau Claire Mill, now site of the upscale Eau Claire Market, on the banks of the Bow in Calgary. Dams for power production were built on the Bow River and several key tributaries after the dawn of the 20th Century. Alberta's fame as an energy producer took hold with the development of the Turner Valley field in the 1920s. As resource extraction increased, so did access to the land. Access opportunities, coincident with more expendable income, more time and more gasoline powered conveyances changed the landscape. All of these land uses, and more, led to noticeable declines in all native fish populations and concerns mounted over future fish production.

There was a cry to "reseed" depleted streams. Unfortunately, there was an inability to connect the dots between over-fishing, habitat loss and declines in trout populations. Neither did early fishophiles appreciate the innate capacity of native trout to refill streams if allowed to do so. Although misguided, one marvels at the enthusiasm for a fix, which was simply to add more fish. Native trout, especially cutthroat, were ridiculously easy to catch, so much so it would seem they weren't deemed "sporting" enough for anglers. Add a negative bias against native species, couple it with a desire for more species and what developed was an expanded and exuberant fish culture and stocking program. We had the power to defy the geography that kept rainbow and cutthroat trout apart. We introduced rainbows to cutthroat streams and subsequent interbreeding has produced a hybrid species. The marriage we arranged, courtesy of fish hatcheries, has bludgeoned natural aquatic diversity.

We forget, as we fiddle with the thermostat and wonder whether dinner will be Chinese food or pizza that a cutthroat lives (or dies) within the immediacy of its habitat. There's no take out number on a cutthroat's speed dial. What cutthroat have done is rolled the storms, the floods, the droughts, the changes in water temperature, the good and the bad – the natural variability of their world – into their genetic material as a mechanism for survival. Unlike us they are finely tuned to the intricacies of their world and are on intimate terms with all its nuances. Cutthroats are superbly adapted to their chosen

"If we raise our sights and begin to "see" the watershed the things that affect trout become apparent."

world. Introducing rainbow trout whose genetics have been tinkered with in fish hatcheries over generations may not be a long-term survival strategy. Once mixed it is unclear how long the mixture might persist. Jim Stelfox, a provincial fisheries biologist with a keen interest in native species, observed: "Getting the rainbow trout out of the cutthroat is like trying to extract the cream from your morning coffee after it's been stirred."

We can't reset Alberta's clock backwards to recreate the slippery hordes of fish of Alberta's past, but we can take stock and commit to maintaining existing populations and supporting modest recovery efforts. To accomplish this will require us to take our eyes off the fish momentarily. We need to raise our sights and view the watershed, to remind ourselves that trout and water quality rely on what we do to the land. And, that within the larger watershed, even the tiny tributaries are important. If we raise our sights and begin to "see" the watershed the things that affect trout become apparent.

The unfortunate status for cutthroat trout today is the culmination of a series of seemingly innocuous compromises made over the health of the watersheds trout rely on and their habitats. Each decision that led to a bigger cutblock, a cutline or trail with no erosion checks, or a culvert crossing instead of a bridge represented a compromise that affected cutthroat trout. Compromise is a smooth, benign sounding term that conceals its dangers in a cloak of apparent reasonableness. "Surely", some might say, "we can do all these things, maintain our economic activity and still keep biodiversity." If indeed that were possible we would have already demonstrated that feat somewhere. The compromise was always weighted to the disadvantage of the cutthroat. Future resource management decisions will need to be driven instead by the needs of the cutthroat, rather than by the political and economic imperatives that have made the species "threatened." The compromises have already been made, someone profited from those decisions, but that

party must end.

Current maps of cutthroat distribution resemble a series of unconnected dots. You might think these are cutthroat forts set in a great hinterland. Unfortunately the forts have no lifelines between them and are not secure themselves. That is worrisome for a species that lives in a dynamic system subject to natural disasters, let alone the human-induced ones. Cutthroat trout prospered in this risky situation with a reliance on connectivity to other populations that could re-seed an area when some natural perturbation wiped out a segment of the population.

Can these native fish be saved? Call me crazy but I think we can undertake a rescue mission. All we have to do is have a vision of native westslope cutthroat trout being an integral part of the watersheds of the Eastern Slopes. In principle the plan shouldn't be difficult. Cutthroats need just a few basic things to allow them to survive and thrive:

- Cool, clear, unpolluted water.
- Streambed gravels that are clean, in a watershed with little sediment.
- A flood regime that matches the life cycle of the trout.
- Enough water in low flow periods to allow all life stages to survive.
- Accessible habitat to provide food and cover from predators.
- Enlightened fisheries management that protects them from overharvest.
- Enlightened land use practices that consider the cumulative effects on watersheds of all our human activities.
- Connectivity between existing populations.
- Removal of and /or isolation from non-native fish competitors.
- Recognition from us that cutthroat have some substantial "mojo" that has allowed them to survive for at least the last 10,000 years, following the melting of continental and alpine glaciers.

Gorge Creek is one creek where the Westslope Cutthroat Recovery Team has discovered high densities of cutthroat trout

PHOTO: © J. EARLE



While we think big about our developments we are small thinkers about the one attribute – “big space” – that maintains many species. All in their own way, grizzlies, woodland caribou, sage-grouse and cutthroat trout need space where our footprint is minimal. Landscape integrity is an important element if we are to sustain cutthroat trout. We have to think about connectivity, the requirement for critters to move easily and safely between habitats, especially for cutthroat trout, isolated as many populations now are from each other. The simple answer to cutthroat trout maintenance is: keep the pieces; keep the connectors; and connect the pieces.

History tells us the hardest one for us to grasp is that there are limits and thresholds. The reality is there is a minimum viable population and habitat size for species, cutthroat included; that rule is immutable. This is the weak link – we know that cutthroat have disappeared but not the point of disappearance. Dave Mayhood, an independent fish researcher, points out “there are not many more than a handful of genetically pure populations of cutthroat left in Alberta.” These are the metaphoric crown jewels of westslope cutthroat trout. Unlike the dazzling array of rubies and diamonds guarded by a phalanx of protective mechanisms, the last bastions of cutthroat trout have little protection. Prudent management of a

species entrusted to our care and one that is teetering on the brink no less implies we know enough to at least cause no more harm.

By the very nature of the term “unintended consequence”, too often our development choices have tended to dismiss the effects on fish and wildlife as “inconsequential.” That was the past. In the future we need to think of “intended effect” to ensure what we do in a watershed (and how we do it) adds up to a positive benefit for cutthroat. We are not playing the children’s game of snakes and ladders where a lucky throw of the dice can whisk you out of danger. Instead we need to carefully and consciously develop population maintenance and restoration strategies. Otherwise, the remnant populations and the last few, small, best places for them will inevitably wink out, one by one. A fish Meriwether Lewis called a “very fine trout” will be relegated to a few shriveled specimens preserved in ethanol stored on some museum shelf. We can do better.

Should we save these trout? Can we acknowledge they deserve a place in the Alberta landscape? The answer is simple; the world is a better place for having some westslope cutthroat trout in it. It could be a richer world if we had some intact, connected watersheds where we have minimized the roads, cutblocks, wellsites, mines and haven’t drowned the valleys with dams. If we can accomplish

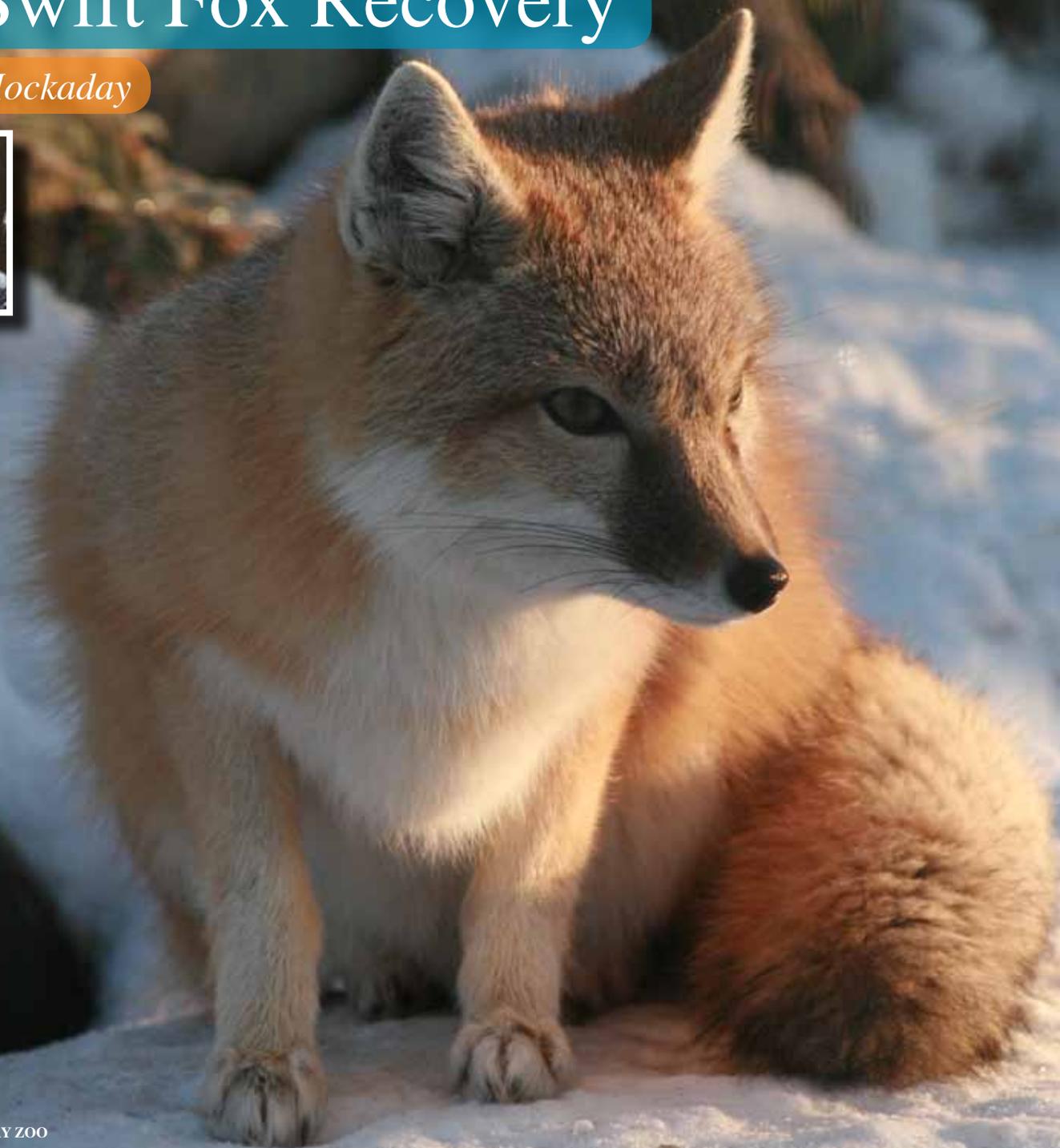
these things, to protect some places for the cutthroat, the intended effects just might benefit grizzly bears and their aquatic analogues, bull trout. It may well be that our own species will recognize that we need these healthy watersheds too.

Nostalgia is not the driving force behind the sentiment to preserve populations of cutthroat trout. It is rather an expression and an acknowledgement of a species very well-fit for life in some of Alberta’s waters, tested as cutthroat have been in the crucible of their habitats for at least 10,000 years. Westslope cutthroat trout evolved to fit a particular environmental context. Their beauty is derived from that fitness. Seeing the flash of a cutthroat in a crystal clear stream, a splash of liquid sunshine, is to experience a natural work of art. That scene, with all of the intricacy and mystery of an interconnected system, is as valuable as a Renoir or a Picasso and as irreplaceable.

Saving the westslope cutthroat trout is a test to be taken by all levels of government (provincial, federal and municipal), industry, academia and the conservation community (including anglers). If we pass, one benefit might be we get to keep other species and their habitats from winking out on us. We have to hope all the parties with a duty to save cutthroat trout will work together with a unified intent. 🐟

Coming to our Senses on Swift Fox Recovery

By Jill Hockaday



Swift Fox
PHOTO: © CALGARY ZOO

Even decades after the last known sighting, swift foxes in Canada achieved a monumental milestone – the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) recommended their down-listing from *endangered* to *threatened*.

However, success in conservation is fragile and frequently fleeting. The Calgary Zoo’s Head of Conservation

Research, Dr. Axel Moehrenschrager, a veteran in species reintroductions and co-chair of the National Swift Fox Recovery Team, knows that swift fox recovery in Canada still has many hurdles to overcome.

“It may be easy to bask in our past success, but there is still more work to do and questions we need to ask to secure a future for swift foxes in Canada,”

says Moehrenschrager. Is there enough swift fox habitat in Canada? What are the impacts of the oil and gas industry on fox survival? How does swift fox conservation in the United States affect the Canadian population? And what is the most effective and efficient way to conduct the next population census?

Through the Husky Energy Endangered Species Program at the

Photos from the Calgary Zoo's motion sensor camera study capturing swift foxes attracted to a scent post.

PHOTOS: © CALGARY ZOO



Calgary Zoo's Centre for Conservation Research (CCR), Moehrenschrager is working in collaboration with provincial and federal government agencies, conservation organizations, universities, industry, community associations and landowners to address these outstanding concerns.

Home on the Range

In Canada an important question is whether we have enough suitable habitat to support full swift fox recovery. Historically these tiny canids, moved freely through 1.6 million square kilometres of virgin North American prairie. In Canada their range once stretched from the foothills of southern Alberta to the Pembina Hills in Manitoba. Widespread conversion of native prairie to agriculture, increased industry activity and urban sprawl has minced this once-expansive range into small pockets of grassland. This alteration of habitat was the primary driver in swift fox extirpation from Canada in the early part of the 20th century.

Today, only about 25 to 30 percent of original prairie remains in Canada and much of this is scattered and isolated with few connecting corridors. Past research has shown that swift foxes thrive in large expanses of short or mixed-grass prairie with high prey availability and limited topographic features, cropland and roads. Currently, there are three small populations in Canada that share a connection through northern Montana.

For several years, researchers at the

CCR have studied swift fox habitat to identify key habitat associations and develop predictive habitat models.

"We've been using these models to advise the federal government and other stakeholders to determine where and which habitat should be protected to sustain the current population," says Moehrenschrager. "However, to fully recover swift foxes we need to project these habitat models into a wider landscape to identify new areas that would be good for foxes, so they can spread out naturally, through translocations or reintroductions."

One of the greatest challenges swift foxes face is that their range exists almost entirely outside of protected conservation areas. Nationally, nearly half of the remaining grasslands are publicly or privately owned and face cultivation or development. This means the support of landowners and local stakeholders and their inclusion in swift fox recovery is critical to the success of the entire program.

Oil and gas activity

Over the past decade Canada's southern prairie has experienced unprecedented intensive oil and gas development, much of it located in prime grassland habitat. The Centre for Conservation Research conducted a preliminary study on the impact of oil and gas development on swift foxes. Using motion sensor cameras, baited with scent posts and positioned near a selected group of oil and gas structures in

southwestern Saskatchewan, researchers were able to assess the visitation of foxes to these particular areas.

Surprisingly, results showed that foxes were regular visitors to oil and gas sites, even long after initial development. The study also suggested they did not respond differently to various types of structures. What is not fully understood is how foxes physiologically react to development and whether these areas are sink habitats – that is, do these areas experience higher rates of mortality and/or lower rates of reproduction in the long term? While it is positive to find foxes utilizing the areas, it is uncertain whether these are suitable long-term habitats for future generations of foxes. More work needs to be done to determine the impact of increased exploration activity and what level is compatible with swift fox existence.

The Montana factor

The Canadian swift fox reintroductions were in large part responsible for the establishment of two self-sustaining populations in Montana after their extirpation in the mid-1950s. So how does the recovery program in Montana fit into the puzzle? The sustainability of the Montana population is critical to the recovery of the entire swift fox complex. "The Montana population acts as a buffer to the Canadian population; with their co-dependence, the populations in Canada and Montana are thought of as a whole," says Moehrenschrager.



“To fully recover swift foxes we need to project these habitat models into a wider landscape to identify new areas that would be good for foxes, so they can spread out naturally, through translocations or reintroductions.”
– Dr. Axel Moehrenschrager

Collaborative genetic research conducted in part by the CCR is necessary to understand how the population moves and fluctuates. Through hair and faecal genetics, researchers are studying the connectivity, dispersal and inbreeding coefficients of these populations.

Currently, the northern Montana and Canadian populations remain isolated from the core swift fox population in the central United States. Vital connection corridors are missing which would link the core populations in areas such as Kansas and Wyoming to the more northern populations. Montana Fish and Wildlife and the World Wildlife Fund are currently conducting camera trapping research in southern Montana to identify new areas that could support swift fox translocations or reintroductions. The ultimate goal is to expand the northern population enough to create a genetic bridge with the core population, in essence returning the natural swift fox linkages that existed several hundred years ago.

The search for a census model

The Calgary Zoo and its partners have been conducting swift fox censuses across the Canadian and Montana prairie for 15 years. One of the primary determinants shaping the upcoming census in 2012-2013 is the availability of sufficient funding. This is driving the team to consider other approaches such as potentially using motion sensor cameras to capture images of swift foxes,

though further assessment is still required to determine its feasibility.

The approach for the last three population censuses has been to subsample 75 percent of townships (10 x 10 km) in southeastern Alberta, southwestern Saskatchewan and north-central Montana with live traps. These were placed beyond the foxes' supposed range, in essence, enveloping the entire population with trapping grids. However, as foxes continued to spread out, it became increasingly difficult to enclose the population using the same sampling regime.

“New techniques will be necessary to assess population status over an increasing territorial range as live trapping requires frequent checking to release captured foxes. Motion sensor camera imaging is less invasive for the foxes, requires fewer people on the ground, is less time intensive and allows sampling of far greater areas,” says Moehrenschrager.

“Unfortunately the cameras don't provide us all the answers. We miss capturing critical data that we can gain through live trapping, such as an understanding of overall health, sex ratio or origin, and more critically, it gives us no real identification of individual animals. It could be six different foxes coming to the camera, or the same fox six times,” says Moehrenschrager.

In conjunction with camera trapping, a process called site occupancy analysis is used which determines the likelihood of foxes being present or not, in a

particular place. While this provides estimates on the presence and absence of the species, a hybrid of sampling techniques may be necessary to identify individual animals.

Thinking longer term

From a scientific point of view, there is good understanding of what swift foxes need to thrive and which areas are highly suitable and unsuitable. Now it's a matter of expanding the picture and looking down the road to guarantee longer term success. Here range protection is key. “We've had dialogue with both federal and provincial government in terms of implementing scientific recommendations for critical habitat. The science has been conducted and now it's a political process,” says Moehrenschrager. “The high level of cooperation between so many agencies and local stakeholders, across provincial and international borders, is quite compelling and is largely responsible for the program's success,” he adds. “Swift fox recovery is complex. It is critical that the simple language of ‘threatened’ versus ‘endangered’ doesn't lull people into a false sense of confidence. We need to ensure we don't lose the critical progress that's been made.”

Jill Hockaday is the Conservation Research Community Administrator for the Calgary Zoo's Centre for Conservation Research.

Enforced Killing of Wildlife at Wildlife Rehabilitation Centres



By Nigel Douglas, AWA Conservation Specialist

What do you do if you find an injured animal? The cat has caught a bird or maybe even a bat or you have come across an injured animal by the side of the road. In situations like these many of us have had cause to use the services of one of the province's seven volunteer-run wildlife rehabilitation centres. Few would suggest that these centres and their volunteers do not do an essential job.

But surprising new conditions imposed by Alberta Sustainable Resource Development (SRD) on wildlife rehabilitation centres are placing severe restrictions on how those centres operate: wildlife rehabilitators are now required to immediately kill a startlingly long list of animals that you might bring in. The list includes:

- All bats
- All frogs, toads and salamanders (with the exception of northern leopard frog)
- Deer mouse, raccoons and skunks

Other animals must be “turned over” to SRD staff within 72 hours. As SRD has no facilities or staff for treating or rehabilitating wildlife, this presumably means that the majority of these animals are also killed. This second condition applies to grizzly bears and black bears, wolves, coyotes, cougars, lynx, bobcat, moose, elk, bighorn sheep, mountain goat and caribou. Some of these animals might end up in private zoos, thus being removed from the wild population, but this is only likely to be an option for a very small number of individuals. Then there is an associated concern about the privatization of Alberta's wildlife.

This draconian requirement means that rehabilitation centres are required to kill the following animals which are listed by the Alberta Government as *May be at Risk* or *Sensitive*:

May be at Risk

- Plains spadefoot
- Great Plains toad

- Canadian toad
- Northern long-eared bat

Sensitive

- Columbian spotted frog
- Long-toed salamander
- Western small-footed bat
- Silver-haired bat
- Red bat
- Hoary bat

from government Fish and Wildlife officials as well as from members of the public. The Wildlife Rehabilitation Society of Edmonton, established in 1989, “has helped thousands of birds and small mammals receive proper medical treatment with the ultimate goal of returning these wild animals to their natural habitat.” The Alberta Institute for Wildlife Conservation and the Calgary



The Cochrane Ecological Institute has rehabilitated animals such as these black bear cubs for 40 years. But under new SRD rules, they will now have to be handed over to government officials. SRD officials do not have the training or the facilities to deal with injured or orphaned animals; they will presumably have little choice other than to kill them.

PHOTO: COCHRANE ECOLOGICAL INSTITUTE

The justification for what would seem to be an unprecedented slaughter is unclear. Wildlife rehabilitation centres have a long and storied history in Alberta. The Cochrane Ecological Institute (CEI), for example, was established in 1971, and over the past 40 years has accepted countless large mammals (bears, moose, elk, etc.)

Wildlife Rehabilitation Society have been rehabilitating wildlife since 1993.

Somewhat bizarrely, an SRD spokesman told the *Edmonton Journal* in March: “We are always looking at improving standards to address the safety of both wildlife and the public. The changes were made to make it safer for the wildlife, the workers at the

Biodiversity Risks from Tar Sands Development

By Carolyn Campbell, AWA Conservation Specialist

facility, and the general public.” Are you as puzzled as I am about how killing wildlife makes them safer?

Smaller animals such as bats and skunks could pose, in theory, a rabies risk (though according to SRD’s 2010 Rabies & Rabies Management Wildlife Info Bulletin #5, rabies has not been recorded in an Alberta skunk since 1994). Wildlife centre staff are themselves usually vaccinated against rabies, making them much better suited to treat animals than a concerned member of the public might be.

For larger animals, SRD’s unexplained suggestion is that they could “lose their fear of humans and pose a safety risk.” But the rehabilitation centres, which represent the individuals who come into direct contact with animals, do not see it the same way. “There have never been any recorded incidents of rehabilitated animals like that creating an issue,” Kim Blomme, president of the Alberta Wildlife Rehabilitators’ Association told the *Edmonton Journal*. Certain animals, of course, can become habituated to people. “But those aren’t animals that have been rehabilitated and acclimatized to people,” says Blomme. “They’re just habituated. And that can happen anywhere where there are garbage and bears and lots of people.”

SRD’s new and onerous conditions are difficult to explain or justify. SRD is responsible for managing Alberta’s wildlife on behalf of all Albertans and, in the charitable wildlife rehabilitation centres, receives an expert and highly specialized service at no cost. Clio Smeeton of the Cochrane Ecological Institute points out “all seven of the wildlife rehabilitation facilities in Alberta operate entirely on donations from voting Albertans. This clearly indicates a substantial portion of the voting public wants the conservation actions (wildlife rescue, rehabilitation & release) undertaken by wildlife rehabilitation facilities to continue.” Wildlife rescue and rehabilitation is a service Albertans obviously want to see. Why, then, is it now necessary to kill all Great Plains toads or hoary bats? Maybe the Alberta government needs to hear from more Albertans on this subject. ▲



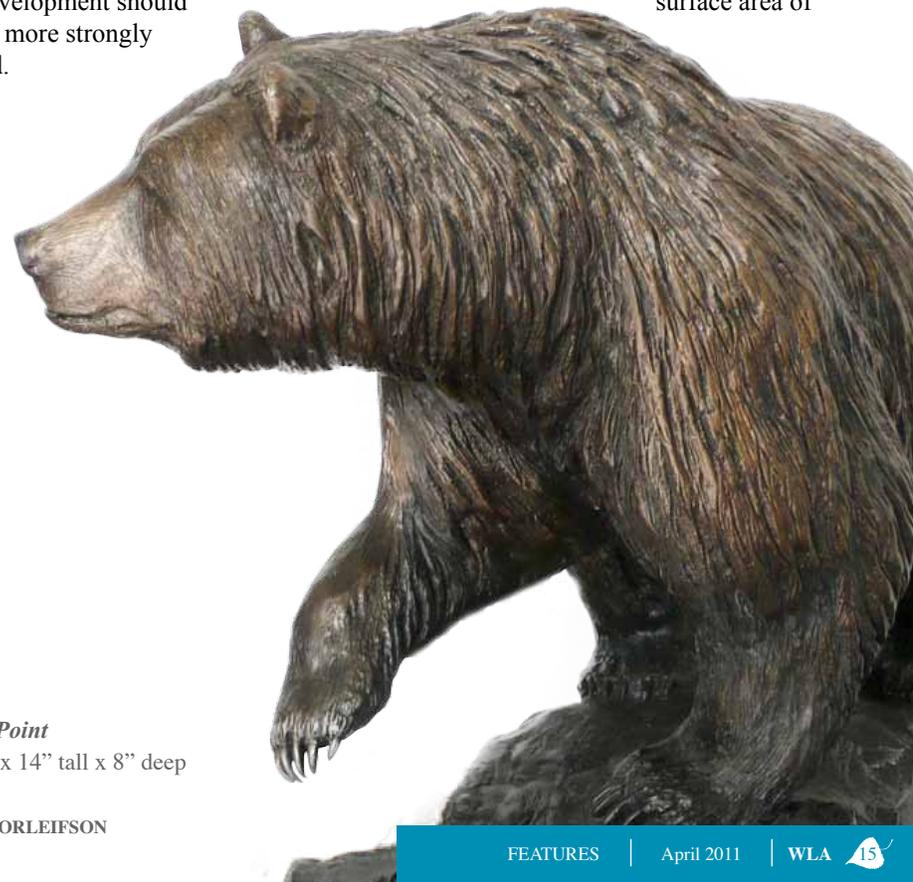
The Royal Society of Canada (RSC) expert panel report of December 2010 provides an important summary assessment of environmental and health impacts of Alberta’s oil sands development. The panel worked for over a year and examined available evidence and knowledge gaps covering an extensive range of issues. This article focuses only on the report’s findings on land disturbance, reclamation and species diversity.

Overall, the RSC report is disappointingly restrained in its conclusions about species diversity, citing many “unknowns” about outcomes decades from now. However, the research it summarizes confirms AWA’s previous assessments that impacts to boreal ecosystems will be profoundly negative for an unacceptably long time horizon, and that cumulative effects of oil sands development should be much more strongly managed.

The post-mining landscape

The RSC “Report Findings in Brief” on land disturbance are that “reclamation is not keeping pace with the rate of land disturbance but research indicates that sustainable uplands reclamation is achievable and ultimately should be able to support traditional land uses... Reclamation and management options for wet landscapes derived from tailings ponds have been researched but are not adequately demonstrated.” The problem with this relatively benign description is it does not reflect, as the research details do, how greatly diminished will be the diversity of habitats, vegetation and animal life that are likely to be supported in this “reclaimed” landscape.

Most of the RSC report’s land disturbance review relates to impacts of mines. These operations strip-mine bitumen deposits less than 70 metres deep and create tailings ponds of toxic wastewater. The “mineable” oil sands region contains 20 percent of recoverable bitumen reserves and covers a land surface area of



Turning Point

15” wide x 14” tall x 8” deep
Bronze

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A cleared tar sands site is dewatered before strip mining. Wetlands reconstructed in a post mine landscape have so far had much less species diversity and abundance than pre-disturbance wetlands.

PHOTO: C. WEARMOUTH

about 4,700 square kilometres (km²), which is 3 percent of Alberta's defined oil sands region area and 1 percent of Alberta's boreal forest region. It extends north from Fort McMurray about 100 kilometres along both sides of the Athabasca River.

According to research summarized in the RSC report, variable and diverse soils of the pre-mined landscape will be homogenized. This loss of variability "could have consequences for biodiversity since patchiness is an inherent requirement of biological diversity for both flora and fauna." Deeper ground layers will be a mix of the original natural "overburden" and could also include tailings sand; they have high saline and sodium content that inhibits re-vegetation. These salts tend to percolate up in shallow groundwater flows. Land contouring and various "cover" soil layers can help protect plant roots from these salts. On better-drained upland soils, salt flushing will likely occur over five to 50 years, after which time it is not expected to significantly affect plant growth.

Upland areas replanted with only

grasses, the standard practice for decades, still have only minimal colonization by native shrubs and trees. Recent regulations to use seed-rich forest floor "litter" as cover has led to much better re-establishment of native species. So far, reclaimed plant communities are less diverse and abundant, though the Panel cautioned that many decades are needed before plant community development can be expected to be similar.

Peat wetlands are fully 40 percent of the undisturbed Athabasca oil sands landscape. According to the RSC report, "reclamation of peatlands (fens or bogs) after mining in the Athabasca boreal region has not been demonstrated. Since peatlands became established naturally over several thousands of years, many consider it unlikely they can be developed in the 80-100 years considered for reclamation." The report suggests that peat forming plants and water flows have been very successfully introduced in mined peatlands in regions outside Alberta; AWA's understanding is that these are in wetter climates.

Because of the saline and sodium content of subsoils (noted above), salts

are expected to be an ongoing presence in low lying or high water table areas such as wetlands. Constructed post-oilsands wetlands are discussed; they are salt-tolerant marsh wetlands with less biomass and species diversity than natural saline marshlands. The report does not make it clear enough that most undisturbed Alberta peat wetlands are in relatively fresh water, not in saline environments, so that constructed wetlands will have quite different plant communities than pre-disturbance peatlands. AWA concludes from this review that peat wetland destruction and the prevalence of salts in constructed marshes represents a major concern for biodiversity that is not sufficiently highlighted in the report.

Another problematic issue for the post-mined landscape is tailings ponds, which now cover over 170 km². The RSC report rightly states that they "raise many questions about [reclamation] feasibility". Toxic naphthenic acid present in tailings remains a challenge to remediate. Proposed end pit lakes that are derived from tailings ponds have not yet been demonstrated to transform into functioning aquatic communities.

The post-In situ landscape and overall species diversity

In situ tar sands operations differ from mines in that they extract deeper bitumen deposits using steam, electricity, combustion and/or solvents. In situ deposits represent 80 percent of Alberta's recoverable bitumen reserves. They cover a land surface area of about 135,000 km², which is 97 percent of the total Alberta oil sands region area and 35 percent of Alberta's boreal forest region. To its credit, the RSC report acknowledges that "the land area influenced by in situ technology is comparable to that disturbed by surface mining when [landscape] fragmentation and upstream natural gas production [for steaming or solvents] are considered."

The report deals too lightly, in my view, with the impact of this in situ land disturbance; there is a technological rather than a precautionary approach to this issue. "Little reclamation research has focused on in situ operations, thus data are not available for this report... the nature of reclamation for disturbances caused by in situ bitumen recovery poses

no particular technological challenge.” One biodiversity issue that could have been identified, at least as a data gap, is the extent of wetland loss from legacy and current practices. Another concern is the impact of densely spaced seismic lines created to delineate bitumen deposits.

The RSC report’s review of animal and bird (faunal) species diversity is brief and mostly seems to apply to combined mining and in situ disturbances. It acknowledges studies predicting that woodland caribou populations will not last more than forty years in the Athabasca oil sands region and that millions of birds will be lost due to habitat fragmentation. The report suggests moose habitat issues are largely resolved by pipeline crossing structures which does not seem to take into account impacts on wetlands.

Given the many factors noted above that would seem to inhibit long-term habitat and vegetation diversity, it is unclear why the report summarizes the main biodiversity concern as one of time scale. “Even though these areas will be reclaimed, there is a long time between habitat destruction and successful reclamation.” Elsewhere, the report reviews financial security reclamation arrangements, and warns that current practices expose the government to major financial liability risk. A similar risk statement about biodiversity loss would also have been appropriate.

What do Albertans expect the post-mining landscape will look like?

The RSC report emphasizes that Alberta regulations require land to be reclaimed to “equivalent land capability,” which is a “functioning natural landscape” of some productive use, not necessarily a “boreal ecosystem.” It asserts that the goal of restoration, a return to pre-disturbance conditions, is not possible in every exact way, so the concept is of little value. This seems an overly drastic dismissal of a useful concept, since “restoration” expectations could be linked to Alberta’s own Biodiversity Monitoring Institute’s measures of landscape intactness. The RSC report also asserts that there is a mistaken popular perception that boreal ecosystems are the reclamation goal, in part because of different definitions of “reclamation” used in government information and regulatory documents.



Strong cumulative effects management that sets disturbance caps is needed in the boreal region..
PHOTO: C. WEARMOUTH

The RSC panel states that the reclamation industry and regulatory bodies of Alberta favour reclamation over restoration. Yet high profile oil sands industry communications perpetuate the public’s impression that the boreal landscape will be restored. For example, CAPP’s Land & Technology site states “we are using innovation to help us return the land we use to a sustainable landscape that is equal to or better than how we found it.” In the oil sands industry’s public relations campaign of autumn 2010 (<http://www.capp.ca/oilsands/ads/Pages/default.aspx>), a TV ad states: “We want to leave restored land that people are proud to see for generations after that.” The print ad on land impacts is headlined: “I grew up on a farm. I know what it means to have the land restored.”

According to the Panel, the “forward-thinking perspective” on reclamation is to clearly define end goals “unriddled by semantics and opposing perspectives” so that Albertans could “reassess what is needed and what is achievable and separate that from what is idealized and desired.” More bluntly, the report asks: “Could stakeholders step away from their

preconceived past-focused desires and merge their needs for a newly developed landscape?” Aside from displaying a breathtaking insensitivity to aboriginal treaty rights and traditional land uses, this statement seems to suggest Albertans should only aspire to what an overly permissive development policy can deliver, rather than question the policy itself.

The RSC report acknowledges that “many advocate a total disturbance area cap for each project, and for the oil sands in general... To date, neither government nor industry has shown any interest in adopting a disturbance cap. There is further concern with the potential inability for cumulative effects to be understood and addressed.” AWA maintains that Albertans do not want, nor should we settle for, vast tracts of our boreal forest with markedly less habitat and species diversity. Instead, the RSC findings further strengthen our perspective that resource leasing and industrial project approvals should only proceed if cumulative impacts are much better managed to maintain biodiversity. 🌱

Behind the Scenes of “Potatogate”



By Nigel Douglas, AWA Conservation Specialist

Records removed pursuant to Section(s):
22(1)
of the Freedom of Information and Protection of Privacy Act
Page 2

An AWA application under the provincial *Freedom of Information and Protection of Privacy (FOIP) Act* to see documents and correspondence behind the sordid “Potatogate” saga has been both revealing and frustrating. AWA was hoping for a window into the secretive process that very nearly allowed 16,000 acres of public land – scarce native grassland, home to numerous endangered species – to be sold off to a private individual to be ploughed up to grow potatoes. The window turned out to be a cracked and a grimy one, mostly obscured by carefully drawn curtains, yet it did still reveal a few nuggets of important information.

AWA broke the Potatogate story in September 2010 when we revealed that, in a behind-closed-doors process, the Alberta government had deemed 25 sections of native prairie near Bow Island to be “surplus to requirements.” Despite the fact the land was known to be habitat for a number of species listed under the federal *Species at Risk Act* (including burrowing owl, ferruginous hawk, and Sprague’s pipit) the plan was to plough the land up to grow potatoes (see *WLA* October 2010).

After an unprecedented outpouring of public opposition – from conservationists, hunters, ranchers and a wide range of other interests – the attempt to buy the public land was withdrawn. This particular piece of land received a temporary reprieve, but the process that allows for these sorts of sales to be approved behind closed doors,

with no public input, remains unchanged. (The fact that the Alberta government subsequently transferred 84,000 acres of tax recovery land to municipalities in southern Alberta, again with not a whiff of public consultation, suggests that the message is not getting through).

Recreating the Dinosaur

Trying to make sense out of documents received through a FOIP application is somewhat akin to trying to recreate the appearance of a giant dinosaur skeleton from an odd tooth and a scrap of a toe bone. The majority of the useful and enlightening information appears to have been withheld. No correspondence involving ministers or deputy ministers was included in the response to our request. One is left with strings of email correspondence, where one person sent an email to another person on a certain date, but the entire contents of the email have been deleted. If the contents of the email messages have been retained, then they often refer to attached documents which have themselves been deleted from the information supplied by the government. Freedom of information indeed!

The provincial *Freedom of Information and Protection of Privacy Act*, grand as it may sound, allows an enormous amount of discretion in what information may be passed on and what may be withheld. For example, the Act states:

“The head of a public body may refuse to disclose information to an applicant if the disclosure could reasonably be expected to reveal...

(b) consultations or deliberations involving
(i) officers or employees of a public body...”

The Ministry of Sustainable Resource Development is such a “public body”,

and so effectively the ministry can withhold any information that involves one of its employees. Not particularly illuminating is it? Of the 912 pages of potential information received through AWA’s Potatogate FOIP request, 194 were subject to “partial severing” or were “severed in their entirety.” One has to work all the way through to page two – yes, all the way to page two – to find the first *entirely severed* page. Soon after one finds a *partially severed* email message which reads “The answers are as follows.” The rest of the email has been deleted.

Science vs. Politics

One of the most striking impressions from reading the Potatogate FOIP material is just how strong the opposition to the land sale was within the Ministry of Sustainable Resource Development (SRD). Senior staff from the Rangeland and Fish and Wildlife Divisions made it abundantly clear that the application should be rejected, but their opinions were evidently overruled. The Fish and Wildlife division recommended “against the sale of this land due to its high value for species at risk and wildlife, and high ecological value as a large contiguous block of native grassland, a relatively limited resource.” Similarly, a report from SRD’s Rangeland division emphasized: “the land requested is not surplus to our needs as it is currently being used for grazing and recreation. The landscape has high wildlife values and contributes to ecological goods and services of the community... The land is environmentally sensitive and best left in its native state. Taking such a large acreage out of the public land base would have a profound effect on the people who rely on this resource and all the values it provides. (The) recommendation is **not** to sell it.”

The points raised by SRD staff

throughout the Potatogate discussions, from what we can see from the blinkered view of the record we were provided with, were in many ways similar to those raised by AWA in objection to the proposed land sale. SRD senior staff comments included:

- “The lands in question are high quality habitat for species listed as *Endangered* and *Threatened* in Alberta’s *Wildlife Act* and Canada’s *Species at Risk Act*.” Fish and Wildlife reports list thirteen such species confirmed as using the area “for critical life stages,” including burrowing owl, ferruginous hawk and Sprague’s pipit. They also note that: “Land sale and subsequent cultivation could lead to the possibility of legal challenges from third parties under the federal *Species at Risk Act*.”
- “There are considerable and major benefits of retaining this relatively large block of intact native grass, a very limited resource, in public ownership. Retaining these lands as public lands in native grassland condition would benefit species at risk and wildlife habitat and populations, provide ongoing grazing benefits, public recreation, hunting and nature appreciation, as well as many environmental services such as carbon sequestration and overall biodiversity value.”
- “The native prairie component of the Prairies Area has slowly decreased, over time, to where it is only 31% of the total landscape.”
- “Significant portions of the land under consideration are rated as having National Environmental Significance.”
- “Biodiversity on native prairie landscapes is wide and complex providing high values for wildlife habitat including species at risk. Three quarters of Alberta’s species at risk are found in this corner of the province in association with Mixedgrass and Dry Mixedgrass prairie.”

Interestingly, SRD staff comments also echo AWA’s assertions that any land sale would preempt the province’s own Land-Use Framework process, which is currently working to provide planning

guidelines in the South Saskatchewan region: “One of the main considerations of the (South Saskatchewan Regional Plan) planning efforts is to minimize the effects of cumulative effects on native grasslands. Direct sale of large acreages of native prairie, that we know will go to cultivation, is likely not in step with that direction.”

As well as being unpopular with environmentalists, hunters and recreationists, the proposed Potatogate deal was also opposed by the local grazing association. Some of the land in question is leased directly by the applicant; another portion is leased to the Bow Island Grazing Association which did not support the land sale. SRD Rangeland staff wrote at the time: “Removal of the lands applied for from Bow Island Provincial Grazing Reserve without the Association’s consent would reduce PGR (Provincial Grazing Reserve – Nigel Douglas) Association/ patron confidence in the program province wide...Further the 1100 existing PGR patron families could view their current investment in Provincial Grazing Reserves at risk.”

Science vs. Dollars

Perhaps the strongest insight into why the Alberta government continued to entertain the proposal to buy up public land, despite the clear opposition of its own staff, comes in an innocently-titled report, *Economic Considerations in the Irrigation Development*. The report was apparently commissioned by SRD to study the economic benefits of the proposed land deal, but it comes across as entirely one-sided. Despite the title, the primary objective of this report is “to estimate the economic benefits to the province from the irrigation development of the Crown lands in terms of the jobs, GDP and taxes that would result from the

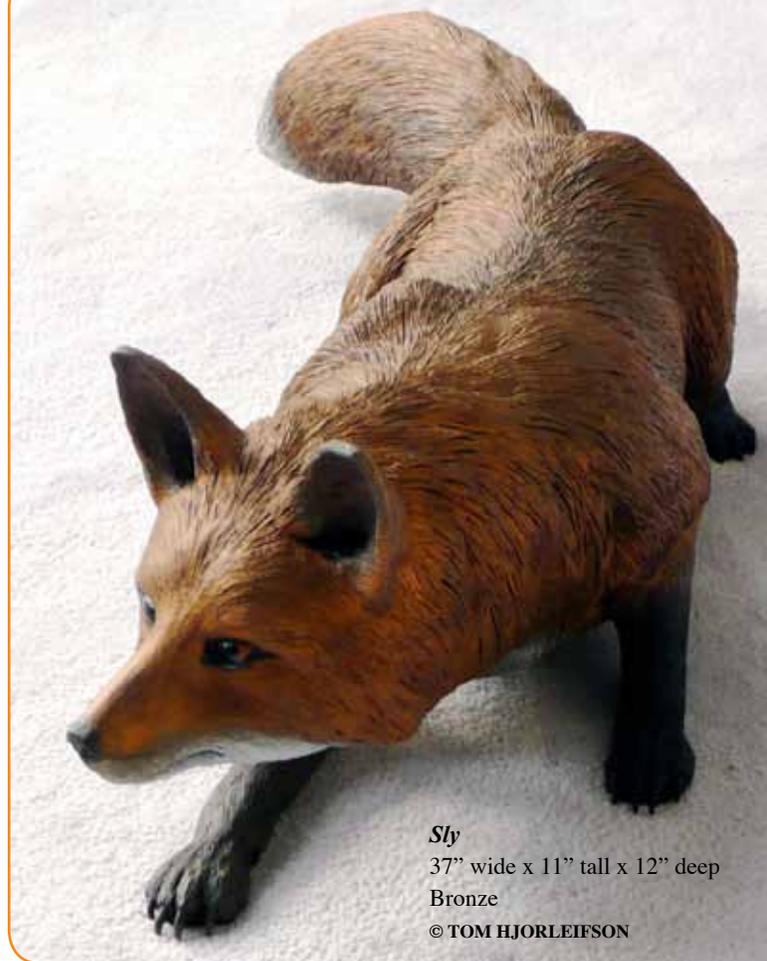
production of potatoes and other crops.”

Unfortunately, the “economic considerations” seem to focus on the economic benefits of the proposed development without looking at either the economic **costs** or the economic benefits of keeping the land in its natural state. Rather than comparing the potential benefits **and** the potential costs of ploughing up native prairie to grow potatoes, the report focuses on how to make more money out of a given piece of land. The focus is short-term economic benefits with no consideration of any of the ecosystem services provided by native grasslands, including wildlife habitat, production of clean water, carbon storage and recreation.

But of course, the fact that the Potatogate land exchange came perilously close to being approved would suggest that one-sided economic arguments held considerable sway over the Alberta government.

Potatogate: Lessons Learned

The lasting impression from reviewing the Potatogate FOIP materials is of knowledgeable and dedicated government staff trying their best



Sly
37” wide x 11” tall x 12” deep
Bronze
© TOM HJORLEIFSON

to do the right thing. Reading the correspondence, one would assume that the proposal to buy the large block of public land would have been turned down out of hand. Government management staff from the Rangeland and Fish and Wildlife Divisions, who reviewed the proposal, made no bones about their opposition. And yet their recommendations were ignored.

This is, presumably, where the political decision-making process comes in and, unfortunately, materials released under FOIP legislation do not include any correspondence involving ministers or deputy ministers. Much as one would love to have been a fly on the wall when some of the discussions were taking place, there are enormous gaps in the evidence available to the Alberta public. Somewhere up the line, the recommendations from senior staff were overruled and the Alberta government continued to work behind closed doors towards approving the land sale. It was only after loud and widespread opposition from Albertans erupted that the proposal to buy the land was finally withdrawn. Incredibly, the government never did turn down the proposal; it was ultimately withdrawn by the applicant.

The good news of course is that, however much the Alberta government ignored its own staff, it could not ignore Albertans. When we do all choose to stand up and be counted, then Albertans do have the power to make our politicians sit up and pay attention. But it is important to remember that the process which allows for public land sales to take place in secret, with no public involvement, remains in place; there is nothing to prevent more “Potatogates” from happening in future. “There’s nothing secretive about this,” SRD Minister Mel Knight protested to the *Calgary Herald* in one breath. “We do not hold public consultations currently in the province of Alberta to sell land for agricultural purposes,” he said in another.

The last word goes to SRD senior staff who wrote: “I suggest that we are able to manage Public Lands in Alberta because we have both the legislated authority and the social license to do so... how we do business is what lets us continue to do business.” AWA heartily agrees with this sentiment: now it is time for the SRD Minister himself to pay attention! ♡

Welcome **MADLINE WILSON!** AWA’s New Conservation Specialist



I am the newest member of the AWA team and will be joining Nigel and Carolyn on the team of conservation specialists. I feel very fortunate to be collaborating with such a strong and hard-working staff, as well as the dedicated team of volunteers, members, and stakeholders that make the work of AWA possible. AWA seems to embody the belief that a small group of thoughtful, committed citizens can change the world (Margaret Mead). The guiding philosophy of eco-centredness, inherent in the advocacy/educational work of AWA, aligns closely with my own personal values. The high level of integrity and passion that guides AWA has allowed this organization to enjoy four decades of success and respect among the diverse communities of Alberta. I hope that my work with AWA will only work to strengthen and continue this legacy.

I am originally from Calgary, and grew up exploring and enjoying the Rocky Mountains with my family and friends. These early experiences have instilled in me an appreciation of natural spaces and belief in the intrinsic value of preserved areas. I hope to foster this same appreciation in others through opportunity, education, awareness and preservation.

I recently completed my undergraduate degree in Biology and Environmental Studies at the University of Victoria. I spent the last five years exploring Vancouver Island, developing an immense appreciation and interest in both the aquatic and terrestrial diversity present on British Columbia’s coast. I hope my work with AWA will offer opportunities to develop a similar level of recognition and personal connection to the wild lands, spaces and waters of Alberta, as well as with the people who call these landscapes home.

Family Ties and Volunteer Times: The Cocketts Are Calgary's Volunteer Family of the Year

By Christyann Olson, AWA Executive Director



Earlier this year Alberta Wilderness Association nominated the Cockett family, an outstanding family of volunteers, in the 15th Annual Leadership Awards presented by Volunteer Calgary. As we completed the nomination papers and detailed the family's long history of volunteering their time and energy to worthy causes it was eminently clear that they epitomize what these awards are intended to recognize. It would be impossible for me to do justice here to their record of service and devotion to family and to social and environmental causes. Instead, I want to give you the briefest of glimpses into what they have done and invite you to imagine what adventures their passions for caring and citizenship will take them on in the future.

The Cockett family has been part of AWA events and our day-to-day work at AWA for many years; this is underlined by this family of five's participation in our annual Climb and Run for Wilderness Earth Day event as a family for 12 consecutive years!

Audrey Lane, Grayson, Rowan and their parents, Robin and Polly are role-models; they personify commitment

when it comes to pursuing social and environmental justice. They have received awards before, separately and in recognition of their efforts to promote senses of community.

This past year Polly and Audrey Lane worked for Habitat for Humanity in Guatemala for two weeks where they helped to build concrete-block houses in a rural district. Audrey Lane spent spring 2010 volunteering with Mountain Haven at YMCA Camp Chief Hector, a program offering disadvantaged mothers and their children the opportunity to immerse themselves in nature and its healing powers. A Toyota Earth Day Scholarship has launched Audrey Lane's studies in environmental and social justice at the University of Victoria.

In 2010, Grayson successfully completed paramedic training and he is a corporal and qualified medical technician in the Reserves of the Canadian Forces. He regularly fundraises for healthcare causes including the Thanksgiving Memory Run for Alzheimer's and the Movember Foundation for prostate cancer. As he grew into a young man he participated in the multiple climb event at the AWA Climb and Run for Wilderness. We always knew he and his siblings would be at the top of the pack and like to break climb records. Audrey Lane still holds the record for Most Climbs Youth female; she completed the 802 stair climb 16 times in 2008 and 2009!

Rowan completed a degree in Environmental Geology in December 2010; his honours thesis examined public groundwater supply issues. In his spare time he maintains and updates the community website he designed for the Brentwood community and he has developed a computer program that helps undergraduate geology students better understand three-dimensional concepts. He and his mother, Polly, annually serve as judges for the Calgary Youth Science Fair.

Perhaps it was simply in the nature

of these youthful citizens to become the role models they are today. I suspect nurture played a very significant role. Their parents, Robin and Polly, have encouraged their commitment to community. Robin and Polly volunteer *with* their children as shown in the family's involvement in the Youth Science Fair; Robin and Audrey Lane, offer an example of the "family" dimension of their volunteerism. They have volunteered together as cross country ski instructors with the Bow Waters Jackrabbits.

Robin and Polly have been volunteer stewards with the City of Calgary Parks Biodiversity Conservation program in Nose Hill Park and in 2010 they ran weekly and monthly summer stewardship bees in the Whispering Woods natural area park in Brentwood. Polly writes a monthly Environews column for the community newsletter, volunteers with the University of Calgary Faculty Women's club and gives talks and guided tours of the Whispering Signs interpretive signage project. You'll notice her as the author of an occasional story in the *Wild Lands Advocate* too.

We hope highlighting the volunteerism and dedication of this family will encourage others to learn more about the link between and importance of social and environmental issues in our world today. We are honoured to bring them to your attention, for you to know they were nominated and especially to say they were chosen by Volunteer Calgary Leadership Awards to receive the Volunteer Family Award for 2011.

Someone asked me what's special about this family? When it comes right down to it, I think it has a lot to do with the fact this family really gets it. They live and nurture the inextricable links between social concerns and action; they are ever cognizant of our environment and how much it influences our very health and well-being. Congratulations to the Cockett family from everyone at AWA. 🌱



Rufous
12" wide x 17" tall x 11" deep
Bronze
© TOM HJORLEIFSON

Alberta Wilderness Association will once again sponsor a full program of summer hikes, backpacks and tours in 2011. Each event will focus on an interpretive activity that takes participants into some part of Alberta's wonderful wilderness. A knowledgeable leader will accompany each group, providing a delightful mix of information about the wildlife, wild plants and wild waters of that particular natural environment.

Details of most of these events can be found in the Events section on page 31 of this month's issue.

The 2010 hikes and tours program was a smashing success! Here are photos of some of the most memorable events.



Surprise! A May snowstorm in the Whaleback



A happy tour group - Oldman River Falls



Dry Island - Learning about Dinosaur digs



Cosy homes - Castle backpack trip



Ya-Ha-Tinda - Fog was no obstacle



The Castle Area's namesake - Castle Mountain

ALL PHOTOS: P. SUTHERLAND

Living with Coyotes in an Urban Environment

By Paul Sutherland, Hikes Tours and Talks Coordinator



Canadians' attachment to wilderness arguably belies the fact we are an increasingly urban people. Approximately eighty percent of us live in a city containing 100,000 or more residents. The proportion of citizens living in a rural environment has been steadily dropping for at least one hundred years. I personify the trend. I grew up in the country but left as a teenager to join the steady flood of people flowing into towns and cities.

There isn't much wilderness, wildlife or wild waters within the boundaries of most urban environments. Sometimes, when it comes to supporting these wild things, we urbanites are too quick to criticize those who live or work in the less urbanized environments. How often do we hear questions like: "Why don't all ranchers show more tolerance towards wolves?" or "Why don't the resource extraction industries do more to ensure caribou protection and survival?" These questions are valid but, as city-dwellers, we should not be too quick to judge the challenges faced by people outside our environment as they try to deal with the balance between conservation and other human-oriented objectives.

This challenge was at the forefront for me when I attended AWA's March 15 Tuesday Talk – "Living With Coyotes." Our association was fortunate to be able to attract two excellent presenters for that evening. Dr. Shelley Alexander, of the University of Calgary, led off this well-attended event by establishing some very relevant coyote facts.

Coyotes definitely call the Americas "home." In fact, the species evolved on this continent, as did all members of the canid family. Coyotes never left; they are not found on any other continent. The coyote that lives in Calgary today has existed as a species, relatively unchanged, for about one million years. They are survivors!

Coyotes have adapted well to the changes brought about by the steady incursion of large numbers of humans into what is now Western Canada. This ability to adapt to humans includes the flexibility they exhibit when they move into urban environments. Human

activities, such as the agricultural industry, have created environments where a lot of food for coyotes is available and animals that prey on coyotes are seldom found. In other words, we have created environments where rodents thrive and wolves don't. These are coyote-friendly environments.

dimensions: the ecological and the social. On the ecological side, we didn't even have any good information on how coyotes make a living in the City of Calgary. What did they actually eat? What attracted them to certain parts of the city but not other parts?

Dr. Alexander's social research



PHOTO: MIISTAKIS INSTITUTE

But this relationship with humans can be problematic for some people. Small pets very occasionally can serve as a tempting meal. In very extreme cases, people have been bitten. Even the presence of overly-familiar coyotes can be intimidating to some city dwellers. Calgary has certainly not been immune to these challenges. Nobody had done much to actually understand the coyote situation in Calgary, or any other North American city, until Dr. Alexander decided to try to fill this gap. She set out to apply her research skills to helping us understand more about the nature of our existence among the coyotes.

Her research focused on two

concentrated on understanding human perceptions of coyotes, with a view to informing coyote management, hopefully by increasing human awareness and empowerment. Shouldn't we try to deal positively with the feeling of helplessness, and even fear, that is felt by some citizens when they consider the role of the coyote in their city?

How do you determine what Calgary coyotes are eating? Well, if you are one of Dr. Alexander's grad students you go out and start collecting 500 coyote scats within the city limits. Then you painstakingly analyze each one to figure out what was in that coyote's diet. The results are very interesting and may be



PHOTO: MIISTAKIS INSTITUTE

surprising to many of us.

It turns out that plants make up a large part of a city-dwelling coyote's diet. About 45 percent of coyote scats contained some type of herbaceous plant material. One-third of coyote scat contained the remnants of crab apple meals! (Meatball loves crab apples too – The Editor) Domestic animal remains were found in only one percent of the sample. However, the results of this study are not all good news; 14 percent of coyote scats contained “anthropogenic food sources”. (That's research-speak for human garbage.) This finding concerns Shelley Alexander; coyotes are able to find and eat garbage far too easily.

Coyote food choices weren't the only information analyzed. Using data from the City of Calgary Hotline (“Dial 311”), Dr. Alexander was able to tease out some patterns from the record of citizens' coyote-related calls. She found that human-coyote interactions were not evenly distributed throughout the year, nor were they evenly distributed across the city. Citizens reported the most serious interactions with coyotes during

the time of year when the animals are raising pups in their dens or when the young lose their dependence on their parents – at about one year of age. When coyote incidents are plotted on a city map there are some areas of concentration. What are the reasons for this pattern?

Dr. Alexander's research, and that of others who have also looked into the situation, tends to confirm that when coyotes are allowed or encouraged to eat human garbage and food associated with humans the number of conflict situations increases dramatically. To a lesser degree, when coyotes are allowed to be comfortable around humans there is also a greater tendency for trouble to develop.

These findings point to some fairly obvious solutions that city-dwellers can easily implement. Secure any potential source of human-related food; clean up fruit from fruit-bearing trees; clean up any sources of dog food, bird seed or other such attractants; monitor your neighbourhood for any signs of people actively feeding coyotes (yes, it does happen!); don't let coyotes be comfortable in or near your back yard – scare them away.

Dr. Alexander concluded by describing her ongoing and new research initiatives. The diet research will continue as will her review of parasite occurrences in coyotes. On the social and human values aspects of her research she will continue to work with the Miistakis Institute's “Living With Coyotes Program.” This initiative, ably explained on the 15th as well by the institute's Samantha Managh, aims to better understand the relationship between humans and coyotes in the City of Calgary.

According to Samantha, a big part of the Miistakis's

approach is rooted in citizen science. They maintain a website (www.rockies.ca/coyotes) that is set up to gather citizen input into a city-wide database. Individuals can register and record any coyote sightings or interactions, using a simple mapping tool. As this database grows the website will publish updated analyses of the data. Miistakis hopes this will serve as an increasingly useful source of information for all Calgarians (or anyone else, for that matter). There is also an expectation that, with increased involvement of more people through the citizen science component, Calgary residents will become more educated about the coyotes that live in the city. Perhaps this increased knowledge will lead to a greater desire to co-exist with these wily survivors.

Have you had a chance to reflect on your reaction to coyotes? Are you as educated about the issues as you could be? Are you able to say “I am working hard to find the balance and tolerance towards my fellow creatures that I sometimes criticize as missing in others?” Perhaps learning more about urban coyotes can help you find the answers. 🍀

UPDATES

A Grizzly Toll

Even though grizzly bears were officially listed as *threatened* last June, grizzly bear mortality in Alberta once again surpassed unsustainable levels in 2010. An estimated 29 grizzlies died in Alberta, approximately 4.2 percent of the population. This level of mortality is much higher than the 2.8 percent mortality rate suggested as “sustainable” in the Alberta government’s own 2010 report, *Status of the Grizzly Bear (Ursus arctos) in Alberta: Update 2010*.

Twenty-one grizzly deaths were recorded in 2010, seventeen of which were known to be human-caused. A large number of grizzly deaths go unreported every year; to give a fuller estimate of total mortality, Alberta government scientists add 40 percent to the number of recorded mortalities (*Status of the Grizzly Bear in Alberta*). This adds up to an estimate of 29 grizzly deaths in Alberta in 2010, or 4.2 percent of the population.

According to the provincial status report: “A large area of grizzly bear habitat, particularly south of Highway 16, currently appears to be a population sink, but could support a self-sustaining population if human-caused mortality was reduced. To reduce mortality, motorized access to bear habitat must be minimized and human activities that lead to conflicts with bears must be mitigated.”

Ten years after the provincial recovery process for grizzlies “began,” little has been done to reduce motorized access in grizzly habitat, and no grizzly habitat has been protected. There have been some commitments to ensuring that access densities do not get much worse in some core areas of grizzly habitat, but this approach could achieve nothing more than maintaining grizzlies at their current *threatened* level. Actually *recovering* grizzlies is going to take a considerably stronger commitment from the provincial government. Our government needs to do a better job of managing the impact of all of our activities in grizzly habitat. It will require a concerted effort from all of us to ensure that this happens.

- Nigel Douglas



Regulatory monitoring is inadequate to measure impacts of tar sands mine and upgrader sites along the banks of the Athabasca River.

PHOTO: C. WEARMOUTH

Tar Sands Impacts on the Athabasca River

Recent reports point to a major failure of the federal and provincial governments to monitor and thereby regulate tar sands water quality impacts. Contrary to the Alberta government’s long standing claim that tar sands industrial operations do not contribute contaminants to the Athabasca River, two peer reviewed papers authored by Erin Kelly and Dr. David Schindler in 2009 and 2010 found evidence that the operations were contributing toxic polycyclic aromatic compounds (PACs) and metals to the river. This adverse publicity prompted the federal and provincial governments to each appoint panels of independent academic experts to evaluate their regulatory monitoring of tar sands water quality impacts to the Athabasca River.

On December 21, 2010 the federal government released the findings of its six-member panel. The scientists concluded Canada does not have an effective oil sands monitoring program that provides credible data for decisions. The magnitude of natural bitumen loading in the river has not been quantified, which is shocking considering tar sands mines have been operating since 1967. The scientists suggested analyzing lake sediment profiles to fill this gaping hole in monitoring.

As well as undefined baseline conditions, the scientists noted poor sampling design and poor hypothesis-driven design. The current system is

unable to address key issues such as whether predefined thresholds have been exceeded. Monitoring and research is fragmented. The experts found that “there was no evidence of science leadership to ensure that monitoring and research activities are planned and performed in a coordinated way, and no evidence that the vast quantities of data are analyzed and interpreted in an integrated manner.”

The costs involved in monitoring “probably represent only a fraction of the profits generated by the oil sands.” Oil sands monitoring is “dwarfed by the level of activity that was expended on other major environmental issues of the past few decades, such as the acid deposition problem in eastern Canada.” Moreover, current monitoring is not forward-looking; it is attempting to address the legacy of surface mining, and is not being adapted well to rapidly expanding in situ impacts. The scientists recommended a shared national vision and management framework developed collaboratively by relevant jurisdictions and stakeholders and they cited examples in Canada and the U.S. of such an approach.

The provincial panel’s findings were released in early March 2011. This group of scientists found that the Regional Aquatics Monitoring Program (RAMP) is not able to determine impacts from oil sands operations because of insufficient sampling frequency and locations. It reviewed another Alberta Environment paper tracking long-term trends for 100 chemicals in the Athabasca River and

found it was not designed to assess oil sands impacts. They agreed with Kelly and Schindler's general conclusion that oil sands operations are introducing toxins and that their research "has been important in pointing out deficiencies in current monitoring programs in the oil sands area."

In response, the federal and provincial governments have pledged quick action to set up a better monitoring system. AWA applauds the independent research of Erin Kelly and David Schindler in spurring better monitoring of a major Alberta river. Now it is up to these governments to act to reduce risks from the cumulative effects of tar sands operations to land, air, water and the health of the downstream communities affected by them.

- Carolyn Campbell

AWA Speaks Out Against Legislation to Authorize the Establishment of Penned "Hunting" Farms in Alberta

Once again, the provincial government has failed to consult with the public before changing legislation. It has recently come to our attention that Bill 11, the *Livestock Diversity Amendment Act*, includes changes that have the potential to transform the game farm industry, and leave us wondering, **is it still considered "hunting" when the animals are kept in pens?**

Game farming is the domestication and commercial marketing of native and non-native wildlife for a variety of products, (including meat, hides, feathers, and antlers) or for paid hunting. It is an industry designed to privatize and domesticate wild animals (such as deer, elk, or bison), to own and raise them for profit. AWA continues to support living wildlife economies that promote the conservation of wildlife populations in their natural environment and as a public resource to be enjoyed by people who engage in activities such as camping, hunting, fishing and wildlife watching. AWA is opposed to the privatization, domestication and commercialization of wildlife. Game farming is an obvious target of our opposition. Game farming involves intensive, small pasture production or extensive, wide range production of captive wild animals and may pose significant threats to non-

game farm wildlife and conventional agriculture. The installation of high fences disrupts the migratory patterns of wild animals, and the high density of animals living in close proximity has been known to foster diseases and parasites both within "livestock" populations and wild populations.

If passed, this Bill will reclassify domestic cervids (a family of hoofed mammals that includes both deer and elk), as "diversified livestock." As well, Section 10.1 of the Bill would enable the Minister to issue permits or other kinds of permission to authorize activities that would "otherwise constitute a contravention of this Act." This gives the Minister of Agriculture the power to allow penned "hunting" of farmed deer and elk. AWA believes that, as it currently stands, Bill 11 should not be passed and, at the very least, Section 10.1 must be removed. In addition, the province must begin a transparent public consultation process with all concerned stakeholders.

- Madeline Wilson

Caribou Betrayed Once Again by Government Inaction

It is now twenty-four years since woodland caribou were first designated as an endangered species in Alberta. So it would be reasonable to expect that they would be pretty well on the way to recovery by now: right?

Wrong. An updated status report released in 2010, shows that the future for the province's caribou is now more dire than it has ever been: numbers continue to decline in the majority of the province's herds, and the Alberta government has utterly failed to halt the decline, despite having all the knowledge it could possibly need to do so.

The Status of the Woodland Caribou (Rangifer tarandus caribou) in Alberta: Update 2010 is quite clear about the inexorable decline in caribou populations:

- "Of the 13 populations with sufficient monitoring data, 10 are demonstrating population decline. The 10 caribou populations documented to be in decline occupy 83% of the total area of current caribou range in Alberta, and constitute the majority of caribou occurring in the province."
- "Approximately 70% of all caribou

in Alberta occur in populations that are known to be declining."

- "More provincial caribou populations are now in sustained population decline than was the case when the first edition of this status document was prepared in 2001."

Of just three populations in Alberta *not* considered to be in decline, only one is stable. The other two - the Little Smoky and "possibly" the A La Peche herds - are "currently being kept stable, at reduced population levels, by means of a program to annually reduce wolf abundance." If there is one caribou recovery action that the Alberta government is enthusiastic to undertake, it's killing wolves. If only that enthusiasm was matched by a willingness to address the actual problem: unremitting industrialization of caribou habitat.

"Levels of habitat alteration from industrial developments are high on most caribou ranges in the province and projections forecast continued high levels of future industrial activity," the status report continues. "Provincial land-use guidelines for industrial activities have not succeeded (as a sole tool) in providing for long-term caribou population and habitat conservation, and guidelines for caribou habitat protection currently are not being applied in all caribou ranges within the province."

In one more bizarre twist in a sorry tale, according to the *Edmonton Journal*, the province's own scientists on the Scientific Subcommittee (SSC) of the Endangered Species Conservation Committee (ESCC) recommended that the situation for caribou was so dire that their status should be upgraded from *threatened* to *endangered*. But the SSC advice was apparently overruled by the ESCC, a "multi-stakeholder" body including representatives from the Alberta Forest Products Association and Canadian Association of Petroleum Producers amongst others.

So the very industries which have continued to push our woodland caribou towards extirpation in Alberta get to veto any measures which might be introduced to limit their activities. And we wonder why Alberta has such a tarnished international reputation for its cosy relations with resource industries!

- Nigel Douglas

DEPARTMENTS

RECALL OF THE WILD

Louise Guy: Intrepid Soul
(May 26, 1918 – September 30, 2010)

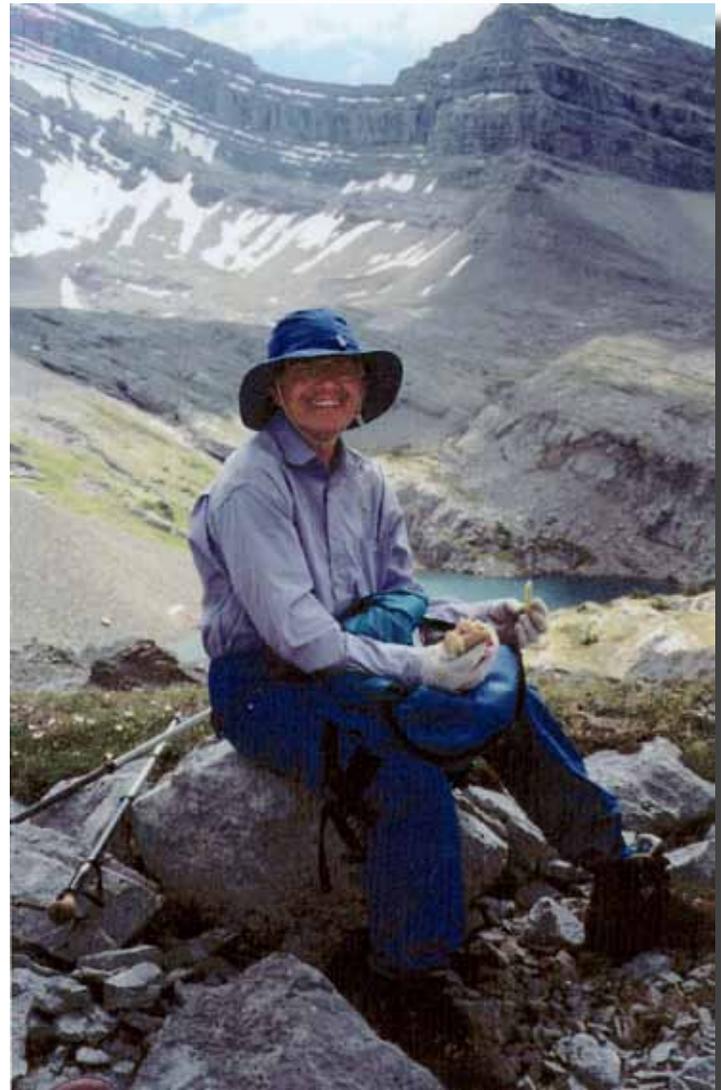
By Polly Knowlton Cockett

Celebrating Louise Guy's magnanimous and energetic longevity drew more than 400 friends last fall. All sang her praises, her kindness, her generosity of spirit, and were ever in awe of her physical stamina and humble, ever smiling nature. Louise and her husband Richard, now 94, renowned in the Alpine Club of Canada (ACC) and Calgary Mountain Club circles and longtime supporters of the Alberta Wilderness Association, were also legendary as the most senior couple climbing the Calgary Tower's 802 steps in AWA's Climb and Run for Wilderness for many a year.

I like to tell the story of the first year they climbed the Tower together in 2002 at ages 83 and 85. For a few years, Louise had sponsored my family's climbing efforts, but this year Louise thought she'd take her annual donation directly to the event herself and perhaps give the Calgary Tower's 802 steps a quick whirl and, of course, Richard went along with her. Along the way Louise found herself taking a short respite on one of the stair landings with the equally intrepid Phyllis Hart. After finding out Phyllis had climbed five times at age 86 the previous year, Louise was inspired to keep going herself. After one climb she and Richard felt pretty good, and so tried another. Somewhere along the way they got separated though, and when inquiring at the top or bottom as to whether anyone had seen the other, they were told, "Oh, I think he/she went up again!" And so, thinking, "Well, if she/he can do another climb, so can I!" Seven climbs later they finally caught up with each other and only then rested their legs with a refreshing beverage in the observation lounge looking westward over the splendour of their beloved Rocky Mountains, reminiscing about their own climbs on many of the peaks.

Subsequent years always had the Guys in attendance on Climb Day unless

they were visiting their homeland in England. After raising their family of three children, and by way of various postings in Singapore and India (climbing any and all mountains within striking distance), the Guys eventually immigrated to Canada in 1965 for Richard to take a job as a Mathematics professor at the University of Calgary. A bit like their first time climbing the Tower, they came for just one year, and then tried another, and before they knew it, the lure of the mountains beckoned them to stay for the rest of their lives. They settled straight into the fledgling northwest community of Brentwood, close enough for Richard to commute by foot or bus to the U of C, nearby to all necessary amenities, and with easy access to the mountains. From there they became tireless activists for the preservation of nearby Nose Hill Park, where they often walked. Further afield, often in the Purcell Mountains of British Columbia, Louise at one point took on the entire management of the ACC's General Mountaineering Camps, which had gone into a period of decline until Louise resurrected them by organizing an outfitter for the event. She managed to accomplish the impossible – she generated a profit while she kept the prices as low as possible. These Camps – still a vital part of the ACC's activities – attract dozens of ACC members. They have grown from one to two week affairs



to today's six week camps and bring people from all over the world to our mountains. Louise and Richard rarely missed attending them over the last thirty years.

Aside from the Tower Climb, I knew Louise in two other main capacities. One is through the U of C's Faculty Women's Club (FWC), where I first met her, and through which we each enjoyed a warm welcome to Calgary when immigrating from abroad. Louise was involved in many of the interest groups the Club runs, and twice served as President. In fact, in April 2010, when no one else stepped forward, she volunteered – just shy of age 92 – to serve for a third term as President confident in the knowledge that "all the



Louise was a driving force behind the “Thursday Hikers” of the Faculty Women’s Club.

young ones would help her.”

The main FWC group that Louise was involved in was the Thursday Hikers. For several decades, Louise hiked and skied with other hearty souls from this dedicated assemblage and for most of that time she was its stalwart leader. The best way to describe this is in Louise’s own words, excerpted from “Golden Threads: Women Creating Community” (2009), in which Louise is mentioned many times by other contributors to this anthology of women’s voices about fifty years of place-making in Calgary:

“Many of the Faculty Women’s Club members have always been enthusiastic outdoors people. In fact the proximity to the Rockies was quite a factor in bringing many staff to Calgary! In 1976 Verna Sorensen started the Thursday Hikers. I joined the group two years later at Betty Schofield’s suggestion. I had gained a certain amount of experience in the backcountry with the Alpine Club of Canada, and since Verna was very busy with her three little

daughters and the Girl Guides, she asked me to take over the leading of the group. This soon became one of my major preoccupations, and the source of great friendships.

Over the years, we climbed most of the hikable peaks and passes within a day’s drive, in sun and rain, in winter on skis. Perhaps because we were a very chatty lot, we had very few encounters with wildlife. A couple of times we detoured or ran from menacing looking moose in the rutting season, or retreated carefully from a grazing bear. In the spring, we greeted the emerging flowers as old friends, reminding each other of the names we had forgotten. In the winter, we marveled at the glistening peaks, the glittering flowers of the hoar frost, the ice formations in the almost frozen streams. In summer, we occasionally had a cooling skinny dip in remote lakes ... but as Verna reminds me, still with hats on!

When Gilleen Daffern began

publishing her hiking guides, Betty would pore over them suggesting new places to go. We started making a wish list at the beginning of each summer season, old favorites and new hikes, to which everyone contributed. I would be teased about taking them on shortcuts up steep cutlines (I’m sure it only happened a couple of times), and it wasn’t a really exciting day unless there was some bushwhacking. I sometimes carried a rope if there was some exposure on the route, but really only used it seriously once when we did a circuit over Ribbon Falls. This involves a short climb up an exposed cliff, where there is (or was) a chain, but no holds. So to be quite safe, Jean Pawson tied each person in turn to the rope and I belayed them up.

We would occasionally plan a two or three day trip, to an Alpine Club hut or a lodge, which were great fun. We started celebrating important birthdays (decades) on

the trail. Someone would carry up a cake, rush ahead and surprise the birthday girl with a, "Happy Birthday!" Probably the most memorable one was when Marjorie Taylor became the first of the group to reach 80, on Burgess Pass, above Emerald Lake. (Sadly, Marjorie died recently at the age of 92.) Word of that birthday reached the late Peter Gzowski and we were invited to take part in his morning talk show. This was great fun; four of us sat in a studio here and chatted with him in Toronto. He reproved us for all talking at once! We were astounded at the number of people from across the country who happened to hear our brief moment of fame."

Louise gave a magnificent spirited reading of "Ode to the Thursday Hikers," also in "Golden Threads," at the Book Launch in November 2009, in which Louise is decidedly the "nameless leader with curious needs."

The other main way I knew Louise was as a fellow Brentwood resident. Many were the times I'd see her riding her bicycle home from fetching groceries or see her at the local Farmers' Market on a summer Tuesday. She and Richard could always be counted on to stop by community events such as Mural Celebrations and Street Parties, or be

there in the early mornings when the spans of Whispering Grasses Walkway were swung into place over John Laurie Boulevard providing safe passage to Nose Hill Park from the residential area. Louise and Richard would also come to the summer Stewardship Bees I run in Whispering Woods, a small outlier of Nose Hill right in the community. No one could haul out thistles with more gusto than Louise at age 91, and it was with reluctance that she might let you carry her bag of weeds to the corner for her when she could of course do it herself. But then, she could pull more weeds while you were carting off the bag!

Louise would ride her bicycle the few blocks – all uphill – to Whispering Woods, with her potluck offerings tied down to the rear rack for our post-weeding community brunches or wine and cheese gatherings. Her treats were always homemade, always wrapped in recycled bags or trays – never was a thing ever wasted if there was another use to be had for it. "Well, we are interested in the outdoors, and we have an interest in preserving the environment," said Richard in a recorded conversation I had with them both in August 2010 partly about why they participated in the Bees. "Yes!" agreed Louise. "We saw the notice in the *Brentwood Bugle*, and thought it was a good thing. Let's do that; I was

really interested in that. And so we went from the point of view of doing anything to make things nice. And it is jolly good up there! I keep telling my friends it is a good place. It is a very good resource for the schools, too."

Louise will be missed at our future bees; she was missed in the Tower stairwell this April, and in so many other ways for so many other people, and especially, of course, by Richard. My husband, Robin, will miss giving her a ride home after the Awards ceremony, when she and Richard were always laden with prizes for being the oldest and the most energetic. He used to joke that she was the "bionic woman" with her knee braces, hiking poles, and a piggy valve in her heart. "This hid my complete admiration for her pure grit," said Robin. "She was never to be put off. I recall one journey back from the Climb and Louise was bubbling with life. She was commenting to Richard that it was "such fun growing old" and both were joking about life and death as we barrelled home to Brentwood. Our children sitting in the back could hardly believe their ears! It was truly a Louise moment." In the mountains, on the stairs, or in the park just around the corner... Louise was certainly a soul who knew how to seize the day. ♡

ODE TO THE THURSDAY HIKERS

By Betty Schofield

It was September '76
We met at Maya's house.
We thought we'd like to hike a bit,
Tho' we hadn't got much nous.

Marg Oliver instructed us
Because we were so green,
And Peg Magee came out with us
To help us set the scene.

Our hikes were pretty modest –
Skogan Pass and Ribbon Creek.
The Larches of Larch Valley
Caused stiffness for a week!

And then we took up skiing-
We found it rather hard,
Although we only skied the verge
Of John Laurie Boulevard.

But fifteen summers later
Our hikes are not so tame.
And some have left, and some have
joined,
And some have stayed the same.

We've climbed up steepish mountains
And come down slippery rocks,
Crossed icy streams on tree trunks
Or doffed our boots and socks.

Our leader, who shall be nameless,
Fulfills some curious need
By leading us up cutlines
Where none have walked or skied!

We've had some overnights as well-
O'Hara and Skoki,
But best of all is Windermere
With Ollie and Marjory.

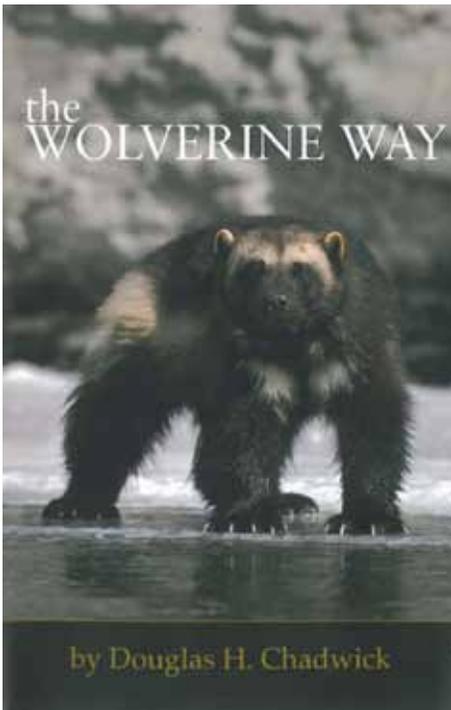
We've seen some glorious wildflowers
And learnt a name or two.
Of goats and marmots, sheep and elk
We've seen more than a few.

We've all of us had sorrows,
And some were hard to bear.
But as a Thursday Hiker
We knew the group was there.

We've shared so many joys too,
And every week rejoice
That we live in this wonderful country
That gives us so much choice.

So when the last trump soundeth
And St. Peter at the Gate
Asks, "And what did you do?"
And you tremble at your fate ...
You say, "I tried to do my best,
And though not free from sin,
I was a Thursday Hiker."

READER'S CORNER



Douglas H. Chadwick,
the Wolverine Way,
(Patagonia Inc., 2010)
Reviewed by Nigel Douglas

For years AWA has talked about the grizzly bear as the ultimate symbol of wilderness: an iconic species which captures the very essence of wilderness itself and defines what it means to be wild. But another worthy candidate for wilderness poster child could just as easily be the wolverine. While the grizzly bear could be the most studied creature in North America, startling little is known about the wolverine; its numbers, its behaviour, even some of its most basic natural history remain cloaked in mystery.

In his beautiful new book, *the Wolverine Way*, Douglas Chadwick, a self-confessed “unrepentant wolverine groupie,” sets out to shine some light on the elusive and enigmatic wolverine. *the Wolverine Way* describes Chadwick’s experiences as a volunteer with the Glacier Wolverine Project, a five-year study of the wolverines in Montana’s Glacier National Park. Comprehensive long term studies of *Gulo gulo* begin to

reveal previously unexpected behaviour; the wolverine, long believed to be an unsociable loner, begins to emerge as a creature with a far more complex social structure than had ever been imagined. Males, long assumed to have little to do with raising their young, are tracked as they travel side by side with adolescent youngsters. The sheer physical endurance and stamina of his subjects becomes abundantly clear. “There’s wild and there’s strong and there’s unrelenting, and then there’s wolverine,” he points out cheerfully. “Nobody keeps up for long.”

A biologist, turned conservation writer, Chadwick writes from a position of profound respect for wolverines and for the spectacular mountain scenery they call home. His love of the mountains comes through again and again. “The passage of years – of ages – has height, width, points, planes and edges here. Time takes on shape and volume. History stacks up around you nearly two miles high. Written in stone, it is the truth about the world, and it is beautiful.” And his deep and abiding respect for this uncompromising wolverine pervades the entire book. “Wolverines,” he writes, “are the ultimate role models for not taking crap from anybody of anything.”

At times it is hard not to feel a sense of unease at some of the research techniques described. Radio collars are impractical for a wolverine, whose neck is short and as wide as its head, so instead the transmitter and battery are carried in a capsule surgically implanted beneath the skin of the belly. Individuals are caught and sedated numerous times throughout the study. But of course it is difficult to imagine how such an elusive animal, observed only fleetingly by the scientists tracking them, could be studied in any other way. And for those involved in the wolverine study, it is obviously more than an academic exercise: these are people who genuinely want to find out more, and to use their knowledge to help to protect this embattled species. Wolverines are going to need all of the help they can get.

The dedication of the researchers is captured dramatically in an episode related by Chadwick. He describes two

volunteers skiing off to check on a trap which has been triggered, presumably by a captured wolverine. One of the skiers falls and breaks his leg but, declining help, he implores his colleague to carry on and deal with the captured wolverine, which is imprisoned in the trap in sub-zero temperatures. He hops and one-leg-skis his way back to their base cabin, and the next day, he hops and skis his way back out to the road, not wanting to be a burden on his research colleagues or on the National Park service.

Of course the wild and untamed nature of the wolverine is a function of the landscape in which they live. Chadwick pays tribute to some of the huge and magnificent protected areas of the Rockies, from Yellowstone to Glacier to Jasper, but emphasizes that “not one of them... is truly large enough to sustain its great beasts over time by itself.” While large protected wilderness is undoubtedly critical, so are the bits in between. “An animal traveling between Glacier and Banff has to get past massive coal mining projects and still more extensive logging operations, cross a major east-west highway with heavier volumes of traffic every year, negotiate a spaghetti-spill of backcountry roads associated with recently installed oil and gas fields, contend with rapid subdivision for new homes and resorts in the scenic valleys, more homesites and recreational facilities spreading upslope, heavier hunting pressure, et cetera, et cetera.”

Ultimately *the Wolverine Way* is a call for a better understanding of the animals themselves, and a desperate appeal to protect the big interconnected wilderness which they need while we still have the option. “As the wolverine becomes better known at last, it adds a fierce emphasis to the message that every bear, wolf, lynx and other major carnivore keeps giving: If the living systems we choose to protect aren’t large and strong and interconnected, then we aren’t really conserving them. Not for the long term. Not with some real teeth in the scenery. We’re just talking about saving nature while we settle for something less wild.”

EVENTS

2011 HIKES PROGRAM

Saturday June 11, 2011

SPRING IN THE WHALEBACK

Join leader Bob Blaxley and experience the wonders of one of Alberta's last remaining montane wild spaces.

Saturday June 11 to Sunday June 12, 2011

BIRDING AND ORCHID WEEKEND

Set up camp in beautiful Sir Winston Churchill Provincial Park (near Lac La Biche) and join a like-minded group for a weekend enjoying spectacular boreal forest birds and wildflowers. (\$50AWA members; \$60 non-members).

Tuesday July 12, 2011

DRY ISLAND

Explore the wonders of Alberta's Red Deer River valley. Climb to the top of the "dry island", an untouched remnant of natural fescue grassland.

Saturday July 16, 2011

YA-HA-TINDA

Hike leader Will Davies will guide you through the truly unique environment of the Stoney's "Mountain Prairie", located on the upper Red Deer River west of Sundre, Alberta.

Saturday August 6, 2011

SAGE CREEK

Hiking in the grasslands? Why not? Alberta's natural grasslands are one of the most threatened ecosystems in the province. Come and enjoy the many hidden wonders of this region, located south of Medicine Hat.

Tuesday September 13, 2011

BEEHIVE NATURAL AREA

This protected area of subalpine and alpine wilderness is located on the upper Oldman River. Explore fall beauty in the world of Rocky Mountain bighorns, pikas, marmots, and golden eagles.

Saturday September 24, 2011

FALL IN THE WHALEBACK

Softened by fall colours, this montane environment will impress you with its one-of-a-kind attributes.

Once again, AWA is offering a summer program of hikes, tours and backpack trips. When the Advocate went to press the following hiking events had been confirmed. Please watch for more events to be published in the June Advocate and on our website www.AlbertaWilderness.ca. Pre-registration is required for all events.

Unless otherwise indicated, fees are: \$20 AWA members; \$25 non-members.

For more information, or to register: 1-866-313-0713 or www.albertawilderness.ca/events

Hiker, Loaf Mountain
PHOTO: N. DOUGLAS



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