



WILDERNESS ADVOCATES ON COLLISION COURSE WITH OFF-HIGHWAY VEHICLES

By Andy Marshall



The animosity between Alberta's off-highway vehicle (OHV) users and those determined these machines be kept out of sensitive wilderness areas is heating up, prompting the possibility of what some call a "war in the bush."

Record-breaking OHV sales, the opening up of provincially designated OHV trails in the Eastern Slopes and other regions conservationists say should be protected, and the aggressive flouting of basic regulations by

riders, combined with lack of enforcement by the province, are tagged among the causes for the heightening tensions.

"There's anarchy in the Eastern Slopes.... It's going to get ugly," says Federation of Alberta Naturalists (FAN) president Glen Semenchuk.

Brett Jensen, a Lethbridge Community College environmental science instructor who is helping map designated OHV trails in the Castle-Crown area of southwest Alberta, says he has never encountered so much conflict in his life. "I've walked into a hornets' nest."

Drawing on media reports of violent confrontations in California between OHV supporters and opponents, Castle-Crown Wilderness Coalition executive director Jeff Emmett is worried about similar events here. Stories of people being dragged along the ground by quads are among the disturbing images.

Alberta Sustainable Resource Development, with control over lands where many of the disputes occur and blamed by conservationists for its hands-off strategy, continues to rely on co-operation among all users. The debate over whether OHVs will be allowed into what have been designated multiple-use areas is over, says department spokesperson Anna Kauffman. So "we're focussing on getting further ahead with the co-operative approach [on adherence to regulations] than with

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An ORV rider in the Bighorn chooses Hummingbird Creek as a trail.



the club-on-the-head approach."

She acknowledges, though, the difficulties of keeping the peace among growing numbers of different users on a land base that will not grow. "It's definitely a challenge to balance those needs," she says.

Interestingly, two Alberta organizations working hard to raise their profiles as responsible representatives of OHV owners downplay the clashes. "Our goal is to work with people. We're not a lobby group promoting hard-line opinion," says Alberta United Recreationist Society president Bruce Dewar. His group has about 500 members, owners of quads, 4-wheel drives, snowmobiles and dirt bikes.

"There's no room for the 'no compromise' type of thinking," says Alberta Off Highway Vehicle Association president Cal Rakach, representing about 2,000 affiliated members. While they're committed to expanding the network of trails they're permitted to use, they point to their codes of conduct and education programs urging members to stay on the trails, minimize their impacts and work co-operatively with others. Using a common expression, they say it's just a few "bad apples" that taint the image of OHV riders.

Conservationists scoff at that position. They say that direct experience and increasingly specific documentation of damage suggest the bad apples are the great majority. The official organizations represent a tiny percentage of riders, notes Semenchuk. Most riders "want to go anywhere they want, any time they want." He adds that the riders and their supporters are only one to two per cent of the province's population anyway, and they play an insignificant economic role compared with other recreationists. Most recently available Alberta Registries figures show 65,000 registered owners.

However, figures from the All Terrain Vehicle Distributors Council of Canada indicate those numbers are changing fast. Sales in Alberta, and Canada for that matter, for the seven major manufacturers have almost tripled in the past six years. Alberta sales for the last three years totalled almost 45,000, compared with 6,000 in 1997. With about 10 per cent of the population, Alberta represents 17 per cent of the national sales base, according to council president Bob Ramsay, and the record-breaking trend is expected to continue.

The conservationists' efforts to better document damage by OHVs extend the length of the Eastern Slopes and out into the foothills and the prairies. "There is a lot of illegal use, and we have the pictures of the damage to prove it," says Lara Smandych, leading an Alberta Wilderness Association effort to monitor OHV activities in the 4,000-km² Bighorn region northwest of Calgary.

Severe rutting, widening and braiding of trails, eroded

stream beds, degradation of out-of-bounds alpine meadows or "frolic areas," destroyed signs, removal of fences and boulders blocking access to forbidden areas, tree-cutting, broken culverts and bridges, plus noise and air pollution are just some of the obvious impacts the AWA team has noted. "The OHVs are having a heyday there," says Smandych.

The longer-term results of that, she explains, are fragmented habitat and consequent changes to the behaviour of wildlife, loss of vegetation, introduction of invader species, and sedimentation and rerouting of watercourses. On top of that is the obvious disruption to hikers, horse-riders and other recreationists.

The long-term goal of AWA is the prohibition of all OHVs in the Bighorn Wildland and any other area deemed environmentally significant, says AWA director Vivian Pharis.

This also includes most of the Castle-Crown area and the Eastern Slopes throughout the province. OHVs should not be permitted in any important watershed areas, including the Ghost/Waiparous, which is very popular OHV territory west of Calgary. AWA might accept them, however, in the multiple-use section of the Ghost/Waiparous.

Another key, Pharis says, is for the provincial government to have a clear management plan for these areas where OHVs are permitted and to enforce the province's own rules.

OHVs have become such a burning issue "because we don't have government agents advising politicians as to what is happening with our lands," she says. While AWA realizes OHVs are

going to have to go somewhere, "we have almost no land management going on and no areas identified that could sustain extensive OHV use in the long term."

Also, Pharis notes, "there is no official recognition of the growing menace to sensitive lands and wildlife from OHV activity."

The scientific evidence of damage has soared in the past three decades. Dave Poulton, executive director of the Canadian Parks and Wilderness Society (CPAWS) Calgary branch says the science "is enough to persuade me" that OHVs should be kept out of the public lands on the Eastern Slopes. "The sheer quantity of the accumulative impact of those numbers is profound." For the Castle-Crown coalition's Emmett, it is clear that "we don't need more studies. The evidence is there."

An impact review done for the coalition and citing some of the many studies on the issue, outlines in detail the negative effects on soil, vegetation, water courses, wildlife and other recreationists.

A more recent report by American Lands, also citing scientific studies, summarizes the issues:



ORV damage in the Ghost.



- **Soil and vegetation.** When OHV users leave established trails, they create new paths through forests. Some riders drive straight up ravines and hillsides ... across streams and grasslands. This contributes to soil compaction, destruction of vegetation, and the spread of noxious weeds. Snowmobiles, although not in direct contact with soils, can still have major impacts on snow density, soil temperature and vegetation, leading to soil erosion. A 1972 study found that after only one passage by a snowmobile, almost 80 per cent of the saplings were damaged, a quarter of them seriously enough to cause a high probability of death.
- **Pollution.** OHVs cause severe air and water pollution, expelling 20 to 30 per cent of their oil and gasoline unburned into the air. Machines with two- and four-stroke engines produce 118 times as many smog-forming pollutants as modern automobiles. On average, these machines produce over 4,000 times more carbon monoxide emissions than are produced by modern cars.
- **Wildlife.** OHVs impact wildlife in several ways, including direct mortality, harassment and habitat modification. Snowmobiles can crush small mammals inhabiting the space between the snow and the ground. OHVs have been implicated in killing reptiles and birds. In addition, the noise and speed of these vehicles impedes the ability of wildlife to find prey, avoid predators, and successfully reproduce.
- **User Conflicts.** The noise, pollution and speed of OHVs create conflict with hikers, sportsmen, cross-country skiers and other traditional recreationists who cherish the peace and tranquillity of our public lands.

The Geological Society of America has concluded that OHVs cause "severe physical and biological consequences."

A recent report for the Sierra Club states: "These vehicles create many impacts to wildlife and fish habitat, native plants, wetlands, watersheds, air quality, trails and scenery. The expanding use of the machines compromises roadless areas' value as last refuges for endangered wildlife and harms the ability of hikers, horse riders, snowshoers and cross-country skiers to enjoy the quiet backcountry."

It may be significant that Alberta's own Community Development Department states OHV use is not compatible in parks and protected areas. Despite that statement, it has made exceptions in some natural and provincial recreation areas representing about eight per cent of the land in its jurisdiction.

Asked why OHVs are incompatible, department spokeswoman Cheryl Robb did not reply – likely to avoid political consequences from other, more powerful departments such as Sustainable Resource Development, which appear to be more amenable to OHV activity.

OHV Association president Rakach, meanwhile, points to the extensive promotion by his group for riders to stay on already compacted trails, thus minimizing damage. He notes

damage is "relative," meaning all users, from hikers to horses, leave an imprint on the land.

Not only the OHV clubs have been polishing their image. The manufacturers have changed their advertising tack in recent years. It's harder to find ads urging enthusiasts to "go where there are no trails." Ads extolling the ability of vehicles to drive through



ORV damage in the Bighorn. A former bog now has water erosion down the quad track.

the muddiest trails or rockiest rivers are on the way out.

The industry has developed a code for promoting environmental, societal and safety implications of riding its products, says Ramsay of the Distributors Council. Videos, such as "Rednecks at Play," showing quads storming down streams and seeking the muddiest areas to wreak their havoc, are an embarrassment to the industry. While the Council can control the ads, Ramsay says, it has less influence on magazine articles urging readers that "the whole point of using an ATV is that it can go places no other machine can go."

Alison Dinwoodie, president of the Stewards of Alberta Protected Areas Association, has seen the implications of that philosophy in what used to be called the Cardinal Divide Natural Area, adjacent to the Jasper National Park.

Despite conservationist objections, some trails were designated for OHV use there. Rakach views this as a success that "will set the stage for our possible continued access to the Bighorn and the Eastern Slopes" – ominous words for conservationists.

Dinwoodie, though, has documented widespread abuse of riders straying from trails onto sensitive alpine tundra, creating three-foot-deep ruts along an out-of-bounds ridge. An obvious contributor, she explains, is a hodgepodge of jurisdiction over the lands in question and a lack of enforcement.

She hears similar tales of woe from stewards across the province. Many of the province's natural areas are quite small. Once they are opened to OHV use, they are lost as natural refuges. Redwater Sandhills, northeast of Edmonton, is a dramatic example of that, she says.

Local jurisdictions have declared the Crowsnest Pass in the south a mecca for OHVs, says Crowsnest Environmental



Action Society former president Val Allen. The vehicles have virtually free rein in the region. This extends south to the Castle-Crown area, where signs posting limitations are invariably destroyed within days of being put up, and north to the Livingstone-Porcupine area stretching up to Chain Lakes. Because the latter area has no management access plan, the extensive network of energy and logging industry trails there is wide open for OHVs without regulation.

What else can be done? Alberta Sustainable Resource Development clearly signals it will continue to rely on voluntary compliance and self-policing by the users. "That's not to say we won't have to take a stronger look at enforcement if that doesn't work," says spokesperson Kauffman.

For Emmett, the multiple-use designation of Forestry Land Use Zones (FLUZ) is a misguided concept from the start. "To preserve biological diversity, [and at the same time] have more logging, more grazing, more oil and gas and more OHV use is absolutely not possible," he says.

To combat the OHV issue, his Castle-Crown coalition has joined a broader coalition of Alberta and B.C. groups called the East Kootenay Environmental Society. Other members include FAN and CPAWS. A strategic decision arising from a Banff workshop by the Coalition earlier this year is the emphasis on stopping and closing roads on public land rather than just controlling OHVs. Other strategies include launching a Canadian database on the scientific literature, together with an education campaign to make the wider public aware of the problems.

The University of Calgary Miistakis Institute has launched a study to monitor OHV and wildlife activity in the Livingstone Range of southwest Alberta. Using remote trail counters buried in the ground, the Institute plans to provide "important information for decision-makers," explains executive co-ordinator Danah Duke. AWA will continue its monitoring program in the Bighorn into next year.

Veteran environmental activist Martha Kostuch pushes the idea of pressing charges under the federal Fisheries Act for damage to fish stocks or spawning areas. Huge fines and the

possibility of jail sentences for offenders have certainly caught the attention of some OHV riders. A drawback is the difficulty in bringing forward technical evidence needed for a court conviction.

Pharis believes that there's little hope of making any progress against the OHVs under the present Ralph Klein government. Although a consistent, province-wide OHV strategy and the opening up of trails in areas considered less environmentally significant would obviously help, that is unlikely to happen soon.

Her longer-term hope is that the science proving the deleterious impacts will become too hard to ignore. "All we can do is combat government decisions with sound science.... If we are allowed to make our case scientifically, I'm not worried," she says.

Pharis also sees hope in the growing awareness by cities throughout North America of their need to better preserve their vital watersheds. "We should be lobbying the City of Calgary to be more cognizant of their watersheds and what is happening in them," she says. "If a powerful group like the City Council becomes involved, they have some clout."

In the meantime, the seemingly intractable dispute in the wilderness has little prospect of subsiding. 🍁



ORV damage in the Bighorn. A new trail is made straight up a slope from the passage of only 6 vehicles. The old horse trail takes a switchback route.

ANDY RUSSELL STILL READY TO GIVE POLLUTERS "HELL"

By Andy Marshall

On painkillers for a sore hip, Andy Russell concentrates hard when rising from his chair. He walks across the room slowly and unsteadily.

His north-facing window at the Pincher Creek seniors' home he now lives in looks onto a manicured garden and a shopping centre. The memory-filled log house at the Hawk's Nest Ranch he's called home since 1937 is hardly 40 kilometres away, abutting the wild beauty of Waterton Lakes National Park. But this new outlook from Vista Village could be a continent away for this almost 88-year-old colossus whose face is turning as craggy as the rugged mountains he has spent so much time in.

"We old guys make room for other people," he says in that

throaty drawl, so familiar to tens of thousands of Albertans from his decades-long career as a beloved public figure.

Titles such as mountain man, conservationist, cowboy, writer, broadcaster, photographer, filmmaker, public speaker, rancher, political candidate, husband, father, trapper, hunter, wilderness guide, horse trainer are part of a resume as colourful and flavoursome as you could find.

Described as one of the most engaging storytellers in Canadian history, he can recall with remarkable clarity the smell of a river or the flight pattern of an eagle from well over half-a-century ago. The memories of dropping out of high school to run a trapline, train horses



and then learn to become a mountain guide, remain vivid. The stories still flow as freely as the mountain streams he knows so intimately.

And despite the occasional forgetfulness of a name – his large, gnarled hands reaching for his head – despite the more restrictive physical circumstances of his life, an ember of passion catches fire once more.

"Nothing lasts for ever, not even me," he says. But "I'd like to live to 200 to give 'em hell," he adds, a broad smile further creasing his face. Indeed, he wants to be remembered for "raising hell."

Prime objects of his wrath are the oil and gas companies that have, in his words, polluted most of Alberta's water courses in their search for wealth. "They don't give a damn," he growls. Whether it was fighting giant multinationals like Shell and Esso over a proposed sour gas line or resisting the bulldozing of seismic lines on the Eastern Slopes, Andy Russell has put his money where his mouth is. "I'm not afraid of any of them," he says. His still-sparkling eyes take on a special glint as he suggests how little the industry's assurances of safety and environmental responsibility can be trusted.

Andy is equally disgusted with a provincial government that he says likes to treat environmentalism as a swear word. "Ralph Klein ... how can we tolerate that man for a leader?" he asks in exasperation.

His plea, particularly resonant with the current priorities of the Alberta Wilderness Association, is for a clean-up of the province's water courses. "What we've done to our watersheds is awful," he says. And while frustrated with what he considers a lack of progress by the AWA with this issue, he urges the organization to maintain consistent and constant pressure on industry and the government to clean up.

"I'd love to have you working for me," he says in a videotaped message to be aired to AWA members when Andy receives the association's Alberta Wilderness Defenders Award in absentia this November. (His son Charlie will accept it for him.)

"There's a great deal to be done. Let's get at it," he adds.

Conservationist ideals have been at the base of most of Andy's activities. He played a prominent role in the fight against the Oldman River Dam, and has written and spoken passionately about his regard for Canada's natural areas. He's still campaigning on behalf of the Canadian Parks and Wilderness Society's proposal to expand Waterton Lakes National Park to include British Columbia's Flathead River valley.

In his *Memoirs of a Mountain Man*, published in 1984, he writes about the incursions of the energy industry, unconcerned "for watersheds, landowners' rights, or wildlife habitat." He pleads for a more "delicate balance" between cold-blooded greed and conservation interests.

The Memoirs are among his 12 published books, celebrating with eloquence and humour the wilderness, and the creatures and humans inhabiting it. A 13th book, based on his numerous published magazine articles, is expected out soon. Andy's first published piece was in a 1945 edition of *Outdoor Life*, produced in New York.

In 1959, after a career as a guide and outfitter that had spanned 25 years, he helped organize a successful delegation to capture Dall sheep in the Yukon. Encouraged by the film footage he shot on that expedition, he and his two eldest sons (including Charlie) embarked on a three-year project to study and film the life of the grizzly bear.

The result was a unique peek into the needlessly (from Andy's perspective) feared animal. In all, Andy produced three feature-length films. The grizzly film led to the book *Grizzly Country*, which,

according to reports, is in its ninth printing.

Andy's gradual conversion from hunter to photographer spawned a prolific number of pictures, about 5,000 of which are now contained in the archives at the Banff Museum. As the guiding business declined, he turned in the 1960s to ranching. With a wry look, he'll tell you about his unsuccessful run for the Trudeau Liberals in 1972 to represent a riding in Lethbridge, the city where he was born.

Along with the horsehair fly swatter and the bear-claw necklace that adorn the walls of his new home is the framed certificate of the Order of Canada he received in 1977. He

proudly shows the Golden Jubilee Medal he received last year from Queen Elizabeth II. And because he didn't complete his formal schooling, there's no hiding his pleasure with the certificates of four honorary degrees from Alberta universities.

Other awards include the Crandall Award for Conservation, the J. B. Harkin Conservation Award, and the highest honour that CPAWS gives to individuals. Alberta Sustainable Resources Development recently inducted him into the Order of the Bighorn.

"I don't have the stamina I used to," he concedes. He makes few public appearances, although just 10 days before this interview he had met with a group of Peigan with whom he's enjoyed a warm association over the years. He's stopped writing now and laughs about his first experiences with a computer. When a technical glitch wiped out a whole bunch of text, "I was tempted to get a six-shooter and blast a hole in the middle."

Andy is confident, though, that his offspring will grasp the torch of championing the wilderness. "I have sons to take my place," he says.

As the interview ends, he notes: "Although I've had setbacks and disappointments, it's been a wonderful life, no fooling." He remains seated, his once-animated face in quiet repose. ❁



Andy Russell at this home in Pincher Creek.



ALBERTA WILDERNESS WATCH

FINDING THE PUBLIC INTEREST AT THE WHALEBACK HEARING

By Shirley Bray, WLA Editor



The Energy and Utilities Board (EUB) hearing for the Polaris Resources Ltd. applications to drill a level 3 critical sour gas well adjacent to the Bob Creek Wildland and Black Creek Heritage Rangeland lasted for 8 days from Sept. 9 to 22. Although a mostly civilized drama, it had its moments of volatility, surprises and even humour. Polaris argued that the area was open for drilling and they had followed all the guidelines so there was no reason to deny their application. Of the interveners, all but one spoke against the well, and their arguments were cogent and eloquent. They spoke of the events that brought them here, the many values of this land and threats to their land, lives and livelihoods that they knew would come with sour gas.

The Background

Maycroft is one of those typical rural communities that prompt urbanites to say: "There's nothing there!" The distance between houses belies the fact that this is a close-knit community with many residents counting back several family generations on the land. This hearing was the second time residents of the community have been faced with sour gas drilling in their vicinity. In the mid 1990's Amoco applied to drill further north, up Bob Creek. The EUB turned down their application, pending a decision on the Special Places nomination of the Whaleback. Although Amoco could have reapplied, it chose to donate their leases, both within the protected area and just outside to the Nature Conservancy of Canada (NCC).

Polaris bought up the freehold mineral rights on a half section of Bill Cross's land that lies adjacent to and south of the Bob Creek Wildland. But the minimum area for drilling a well is one section. The leases on the adjacent one and half sections belong to NCC. Polaris applied for a Special Spacing Unit to give it both sections, with the effect that not only will they have the minimum spacing necessary, but they will also prevent another company from coming in and buying up the remaining leases. This would give them a significant commercial advantage, which is not why such applications are supposed to be made. As part of its effort to gain approval, Polaris wanted a compulsory pooling order to force the NCC to develop its leases through Polaris.

The Setting

The hearing took place in the Maycroft community hall. The hearing was presided over by the EUB Panel consisting

of Tom McGee, the Chairman, Dwayne Waisman and Mike Bruni. Bruni apparently had been parachuted into this role less than a day before the hearing started and he had also presided at the Amoco hearing.

Interveners with standing consisted of the Oldman River Coalition, a group of full or part-time resident landowners (Nelsons, Smiths, Moulsons, Swintons, Horejsis, Batemans, Dr. Wilkin and the Waldron Grazing Cooperative), represented by lawyer Gavin Fitch; James Tweedie, a resident, who has written previous articles on the Whaleback and the Castle for *Wild Lands Advocate*, accompanied by AWA, represented by lawyer Richard Secord; Judy Huntley, representing herself; and Sid and Myrna Marty, represented by Mitch Bronaugh. These were the people who were allowed to present evidence and cross-examine representatives for Polaris. Interveners without standing had made submissions but were only allowed to make short presentations.

For the first four days the Polaris panel was cross-examined by the interveners, EUB lawyer, Rick McKee and the EUB Panel. The Polaris panel consisted of John Mayer, president of Polaris, Orville Cole of Fire Creek Resources, Dick Bissett of Bissett Resources Consultants, Randal Glaholt of Tera Consulting, Ian Dowsett of RWDI West Inc. and Mike Zelensky of Public Safety and Air Quality Management. The next three days the interveners had their say and could be cross-examined by McKee and the EUB Panel, and Polaris, represented by Brian O'Ferrall. The last day was for final arguments. Below I will go through some of the arguments about this well that were aired at the hearing and some of the interesting events.

The Basic Question: Where Do You Draw the Line?

The Board knew it had a very difficult decision to make. In addition to other considerations, the Board is required by law to consider whether an energy project is in the public interest having regard for social, economic and environmental effects.

For Polaris the situation was simple: the land use issue regarding protected areas had been settled, the well was outside the boundaries of the protected area, on private land. As long as Polaris followed the rules there was no reason to deny its application. In fact, denying a well licence, said O'Ferrall, was a very serious matter and more than once he stated that Cabinet could overrule EUB decisions. "Economic, orderly and efficient development of this province's oil and gas resources has been deemed by the Legislature to be in the public interest."



But he also recognized the broader considerations of the Board and said the onus on Polaris was to show that gas development could be carried out in a manner that does not unacceptably compromise the integrity of the Whaleback ecosystem or the surface values of the region. "If you came to the conclusion that [this well's] impacts detracted... substantially and significantly from the [protected areas] you might turn this well down." But he noted that wells were allowed even in protected areas.

In fact, on the 7th day of the hearing (Sept. 18) an Alberta Energy information letter (2003-25), written on Sept. 10, just after the hearing had commenced, was suddenly released. It reaffirmed the government's commitment to honour existing mineral dispositions in protected areas. It was signed only by deputy ministers, including that of Community Development, the department in charge of protecting these areas.

O'Ferrall also argued that the Cheviot Mine, a much bigger development right beside Jasper National Park, was approved. One sour gas well could not possibly have much effect on the Whaleback. He claimed the area was not unique and that the Board obviously agreed because it had previously approved a transmission line through the Whaleback. He said the Amoco – NCC deal could never be honoured; the government cannot protect mineral rights in perpetuity because it offends the mineral land tenure policy. He called the arguments about the deal nonsense and insisted that the lease would be reposted in April 2004.

For interveners the issue was also simple. The protected areas issue had been resolved, but so had the mineral disposition issue. When Premier Klein announced the creation of the two protected areas on May 11, 1999, he also announced, as an integral part of the deal, the donation by Amoco to NCC of the Crown mineral rights. The premier and the ministers of Energy and the Environment made the announcement jointly. "It was clear to anyone who was there or read about it that the intent was that they would never get drilled," said Fitch in his final argument. That meant lease inside and outside the protected areas. At the same news conference Amoco president Joe Bryant said, "NCC will hold the mineral interests until they expire in 2004, at which time they will revert to the Crown and never, never be resold."

Klein made a promise: "I can guarantee you today that we will make sure that the commitment that there will never be any drilling there is so strong that not even another party or another government can break it. We might have to legislate it, but we will certainly find a mechanism to make sure that for all time, in perpetuity, that this land will be protected from oil and gas development." Yet Murray Smith, Minister of

Energy, has indicated the government's intention to repost these rights when they expire. Polaris intends to buy them, hopefully at a closed land sale.

"If the Board allows pooling," said Fitch, "it will be sanctioning a breach of this agreement." The donation of these rights was a key part of the puzzle that led to the protection of the Whaleback. It would be wrong to allow someone else to drill these rights that Amoco walked away from. Forcing the NCC...to pool its rights and to possibly produce those rights with Polaris when the only reason it holds them was so that they wouldn't be produced is clearly contrary to the public interest."

Fitch and others argued strongly that the area was unique, it had nationally recognized environmental significance and had seen very little human impact. "We're dealing with a corner of Alberta here where through the careful stewardship of three generations of ranching families, now into the fourth, that what you see out the window is largely what Peter Fidler would have seen 200 years ago or 300 years ago – an

unchanged, healthy, functioning landscape and ecosystem. And it will change...if this well is drilled and there's a pipeline and particularly if there are more wells...And again, I ask for what? For the development of two sections of mineral rights. Why risk...losing something so precious and unique for so little in return?"

Was this to be the reward for all the hard work of the local residents in getting Bob Creek Wildland protected – that sour gas development would now be so

much closer to their neighborhood?

Judy Huntley noted, "this is a clean area that can be kept clean. With the cooperation of industry, the Whaleback is preserved free of mining, oil and gas development and logging. Forestry tenures were relinquished and oil and gas rights donated to the NCC. Grazing lessees supported inclusion of their lease in the protected areas. In fact, everybody has been really willing, finally, to get on board on this one."

The Eastern Slopes Policy distinguishes this area and the Integrated Resource Plan states of the Whaleback Ridge Bob Creek Critical Wildlife Zone 2: "These lands provide the largest critical winter elk range in a planning area. Restrictions on timing and the extent of mineral exploration activities, access closures and special reclamation standards of mitigation will be necessary to minimize impacts on wildlife. Development of mineral resources will be permitted in [this zone] where it can be demonstrated that there is no net loss of wildlife habitat, disruption of wildlife populations and loss of ecological and extensive recreation values...Any



The Whaleback from Maycroft community hall.



development will be considered in a manner consistent with the protection of wildlife and landscape values."

The current management committee for the Bob Creek Wildland and Black Creek Heritage Rangeland has been drafting a management plan for seven years. The vision of the team from the beginning has been that the protected areas are part of a larger whole, a larger ecosystem, and that lands inside and outside of the protected areas are to be managed in a compatible way.

However, the following paragraph was removed from the final draft management plan by the governmental members on the planning team with no consultation with the non-governmental member and with little or no notice: "The protected area is an integral part of a larger surrounding landscape and ecosystem. Managing the surrounding landscape in a manner that is compatible with the management intent of the protected areas will help preserve the unique character and qualities of the Wildland and the Heritage Rangeland. Private landowners, public land disposition holders and provincial agencies having land and natural resource management responsibilities are encouraged to manage adjacent lands in a manner that complements the spirit and intent of this management plan."

Left in the final draft is the following: "Adjacent land uses will be addressed through the normal referral process. Management direction contained in the Livingstone-Porcupine Hills IRP will influence land use and human activities on adjacent lands." This draft will be available for public comment.

So where do you draw the line? Fitch said "you can never come up with a solution in the abstract that's going to apply to each given situation. The Panel just has to decide if the line in this case is south of the proposed well. They are free to draw it outside the protected area, and even for a well on private land, they still have to consider the impacts. The Special Places committee had not been allowed to consider inclusion of private lands in protected areas. But Cleve Wershler of Sweetgrass Consultants said they could start by drawing lines around designated Environmentally Sensitive Areas.

Who Can Participate and What They Can Talk About

O'Ferrall spent half of the first day arguing about the Board's pre-hearing decision in April about who could participate and what issues could be covered. At the top of his list of those who shouldn't be allowed to participate was AWA. Anyone else without standing was also on his exclusion list. He argued that only persons whose legal rights would be

directly and adversely affected should have standing. He argued that even interveners with standing should only be allowed to talk about very specific issues. He singled out James Tweedie by saying he only had standing because he lived within the Emergency Planning Zone (EPZ, a 13.5 km radius from the wellsite) and therefore should only be allowed to talk about things like safety.

Various interveners rose and spoke in defence of their participation and referred to the Board's original ruling, which was made after a long meeting and similar arguments. Fitch argued that Polaris had constantly challenged the Board's ruling on what issues were deemed relevant in this hearing, that interveners could talk about any issue on the table, that the Board has always allowed brief presentations, and that Polaris seemed to be motivated to keep the number of interveners as small as possible to keep the hearing short and save money.

Secord said he would encourage Polaris to change their attitude; they shouldn't come into the community and try to deny people a voice. He said it was preposterous to try to limit Tweedie's arguments and treat him like a second class intervener. Bronaugh said that there is a set procedure for reviewing Board decisions and Polaris wasn't following it. Andrew Nikiforuk pointed out "when a proponent

doesn't want other people to scrutinize its work, it tends to suggest that we're looking at very bad work, indeed...and that the proposal will likely expose a great many people, my neighbours, to extreme risks."

The Board stuck to its original decision to allow anyone with relevant information to participate, those without standing would be limited and those with standing were not limited. The Board "emphasizes the importance of flexibility, relevancy and fairness to ensure a complete record to assist in discharging its public interest mandate." The concession to Polaris was that interveners without standing were relegated to an evening session to make their presentations.

O'Ferrall annoyed many by jumping up every so often during the hearing and trying to prevent them from asking questions on issues that had been deemed relevant, by complaining about the procedure. For example, he objected to detailed questions on the wellsite saying, of what interest was it to anyone else what a man did on his own private property. If that were the case, why hold a hearing at all? Because the impact of this well went far beyond the boundaries of this man's private property.

Need for the Well

The first thing an applicant has to establish is a need for



The Maycroft community hall with trailers added for the hearing.



the well. O’Ferrall argued that the Board would be doing the community a favour to grant this well licence because if Polaris didn’t drill it, then someone else would and they might be worse. The primary purpose of the well was apparently to gain information and the economic value of the well is unknown until drilling and testing have been completed. Fitch noted that because of the complexity of the geology in the foothills, wells were generally drilled on seismic lines, preferably at the intersection or two lines. Because this well was 200 m from the nearest seismic line the information gained would not be of high quality.

He also noted that the reservoir as envisaged by Amoco was quite different from that seen by Polaris. The latter sees the main reservoir as further south than Amoco. "So is it merely a very happy coincidence that the half section of rights that you happen to have also contains the best location to drill into this prospect?" Fitch asked Maher. Maher agreed it made him a very happy man.

Others argued that no one needed this well. Why not leave the sour gas in the ground until we had better technology and could extract it without pollution and other negative impacts? Maher estimated the chance of the well being successful at 10%, maybe less, with a potential of \$1 billion in gas. The Pekisko Landowners asked "should we allow a 10% chance at a sour gas well that will guarantee a 100% chance of change to the area with the possibility of destroying the area?" Even Maher was driven to ask, "Do we want the benefits of the oil industry or do we want the benefits of what we have here?" Maher also said, "I’m actually looking at converting my house to geothermal."

Maher suggested to Jan Horejsi of the ORC that landowners, CPAWS and the NCC buy his leases for a mere \$2.5 million. He said he didn’t need the well and that he was going to lose at the hearing anyway. This and other comments by Maher about what the government and conservation groups could do prompted Secord to note that "it does appear that Polaris wants to obtain compensation for its half section acquisition and would not object to having its half section of mineral rights expropriated by the Province." Bronaugh suggested that Maher donate his leases, like Amoco, and get a substantial tax write-off.

Public Consultation

Judy Nelson, a member of the ORC, said that Polaris just "didn’t get it." She meant that Polaris did not understand the rural community. For example, they sent out a notice by express mail on Tuesday for a meeting on Thursday, when many residents only pick up their mail once a week on Fridays.

Polaris started out well by sending a person from Land Solutions to meet with residents. Polaris claimed public consultation experts told them that there were a number of people in the community who did not want this well and no amount of negotiation would change their minds. So they

decided that they did not use or need such experts because "we have the best management team."

Public consultation consisted of a few hastily called meetings, an open house and single-family negotiations by Maher and Cole to try to get individuals onside. Offers of compensation were made, although this is not an uncommon practice. The landowner of the wellsite, Bill Cross, originally opposed the well but decided to accept a royalty, and no one really blamed him for that.

One of the most important aspects of public consultation, explained ORC expert Bill McMillan of Equus Consulting, is that the interested parties get together and discuss their views and that the proponent follow up these discussions with documentation showing that the views were listened to and understood. This follow-up by Polaris was noticeably lacking. Tweedie and the ORC noted many irregularities in Polaris’s dealings with him and the community. Misrepresentations, misleading, untimely communications, lack of information, resisting requests for information, disputing lists of issues provided by the Board and so on. The interveners felt that the public consultation process did not meet the Board’s standards and was a failure. No trust or confidence in the company was generated.

During questioning on their public consultation record Maher launched into a diatribe about Tweedie that clearly misrepresented Tweedie’s position. Of particular irritation to him was Tweedie’s non-negotiable stance and how nothing Maher could do would make Tweedie change his mind. He seemed to feel that Tweedie was the key log in the community, the one barrier that prevented him from reaching consensus with all the reasonable residents. He finally said in an exasperated tone, revealing his corporate mindset, "We cannot give James \$500 to go away or a million dollars probably to go away."

Maher said the government should protect the area or oil and gas should be allowed. Polaris did not have a formal public consultation policy and they relied on EUB and CAPP guidelines. He said they wanted to be good neighbours, do the project the best it can be done, totally satisfy the needs of the locals, and respect the environment as much as anyone. O’Ferrall argued that it was Polaris’s technical and operational ability that were at issue and not the character of Polaris or their conduct prior to or during the hearing. The public consultation arguments were "all fallacious and irrelevant." O’Ferrall was fond of dismissing damning evidence with a few simple words.

Sid Marty resides within the EPZ but Polaris tried to revoke his intervener status because he lives 20 minutes away by car. Marty pointed out "H₂S does not travel by car, except perhaps for small natural releases that can be vented by merely opening the car window." But the ridge and valley topography would very clearly channel emissions from the well to his residence. Why was Polaris trying to remove them as interveners at the last minute? "If the proponent is difficult



to deal with at this stage of the process, what will be our chances of getting information and cooperation from the proponent if his application is approved, or even worse, if there is a major problem with the well or associated development?"

O'Ferrall said "we've got a sophisticated, intransigent...community, not just individuals." Many had been interveners at the Amoco hearing. Polaris believed that those opposing the well were in the minority. Interveners took issue with being called "intransigent". Judy Huntley said that she had talked to 75% of the residents in the area and they all opposed the well. Fitch replied that people came to meetings when called, even on short notice, yes they made their feelings known and yes they were fighting to protect their land, but they always welcomed Polaris people into their homes and were willing to talk.

When EUB lawyer Rick McKee asked the ORC panel if they had seen anything at this hearing that made them feel better about Polaris, they answered with a resounding "No!" If anything, their concerns had been heightened.

Plume Dispersion and Flaring

The hearing went into some very technical details about the plume dispersion and flaring models and assumptions used by Dowsett and Zelensky. The basic criticisms were that they did not use the best models, the models were not based on complex terrain, and they used meteorological data from Edson, available from Alberta Environment, instead of local meteorology. Interveners were not convinced that flaring could be done without unacceptable air quality and potential human health and livestock impacts.

Polaris argued that they did their Flare Permit Application based on EUB requirements and not those of intervener experts. Seeing the damning counter argument, O'Ferrall argued that this application was premature because only a well licensee could get such a permit and the only reason they made such an application is that the EUB requires them to test the well. O'Ferrall did not cross-examine ORC's expert, Bohdan Hrebenyk, a climatologist at Senes Consultants, whose peer review was very unwelcome by Dowsett, and asked only one confusing question of Dr. Lawrence Nkemdirim, an internationally known climatologist and

expert on Chinook winds. Both experts had had difficulty getting information from Polaris. O'Ferrall tried to dismiss the whole issue in his final argument by saying that "all of this debate about SO₂ dispersion modeling...is truly academic and moot at this time."

Well, it certainly was not academic and moot to nearby residents who faced 100% fatality in the case of a blowout or flaring accident. Nor was it academic and moot to those residents who made it quite clear that, in case of emergency, not only was there was no cellular service to contact ranchers

out on their rangeland, but many residents lived in places that were very difficult to get into or out of, especially in bad weather. For some people the only road out took them initially towards the well. Evacuation of recreationists was seen as virtually impossible because they would be so hard to find. At the Amoco hearing the Board said, regarding transient users, it "is not confident that evacuation is practical as the primary mean of public safety..."

Mahe had offered residents closest to the well an all expense paid trip to somewhere like Hawaii for a

couple of weeks while they drilled through the sour zone. The wildland park could be closed for that period as well. But what about all the livestock? In his book tour for *Saboteurs*, Andrew Nikiforuk said that the drilling of a sour gas well had become much safer since the Lodgepole blowout. The main concern was the maintenance of the wells afterwards and this is where many problems with sour gas arose.

The Maycroft ranchers told me that they knew that sour gas would change their herds permanently. They knew from the experience of other ranchers that they could expect the sensitive half of their herd to die from sour gas emissions. More resistant ones would survive. They knew that any bulls they ordered would have to come from other sour gas areas because only these adapted bulls could perform properly. One can look with some objectivity on the effects of sour gas on livestock and tally up losses, but who could possibly do the same with their children?

Rick Bell, who lives within the larger EPZ, before it was reduced, had only one question: "what is the maximum possible parts per million of all critical emissions that I could be exposed to during an accidental release?" He still has no answer. "My objection," he said, "is not what has been quoted as a case of "not in my backyard". I believe everyone should



The setup for the hearing inside the Maycroft community hall. Front: EUB Panel sat on a stage. Left: Table for witnesses. Left front: Tables for interveners. Visitors sat left of these. Right: Tables for court reporters and EUB staff. Right front: tables for Polaris. Centre: Two podiums with microphones where speakers could say their piece.



be free of the risk of death or long-term health effects from sour gas. I recommend a moratorium on all critical sour gas wells until it can be determined that all emissions, even long-term low doses, are safe."

I reflected that the story of the Ludwigs had so raised the public consciousness about sour gas that it was now virtually impossible to allay fears of its effects. Who could possibly believe anyone who tried to soothe concerns? O'Ferrall, in commenting about the importance of learning from past EUB decisions, said, "one of the things that makes the *homo sapien* better than...if he's better...the other animals in the universe is that we record and learn from our experience." Well, the Maycroft residents had learned from the bitter experiences of other ranchers subjected to sour gas and they knew, they knew without scientific studies, that it would create significant negative and permanent effects.

In Sid Marty's submission he stated, "we are concerned about the possible health effects to the community and ourselves and to livestock and horses etc. Of both acute and long term exposure to toxins that could be released in the case of drilling accidents or pipeline leaks and through flaring. We already know of a study that shows sour gas is dangerous to livestock; we know the Alberta Government may soon embark on a comprehensive study of the human effects of gas development – gee, if it hurts cows, could it be bad for humans? – and we know from friends living near the Shell plant that it has had detrimental and devastating effects on their lives."

O'Ferrall argued that two members of the ORC had made their fortunes in the oilpatch, drilling wells all over Alberta. Now John and Doug (his son) Maher wanted to make their fortune drilling this well. It was an unfortunate argument, because who wants to be told that someone wants to make their fortune over one's potentially dead body?

In the middle of the intense cross examination by Fitch on the modeling, Maher burst out saying, "this kind of public forum on this expert's opinion is a waste of everybody's time because hardly anyone in the room knows what he's talking about. And it's a waste of my time, my money, and I'm sure even Mr. Fitch's time, because when we get through here, we still won't understand this."

McGee immediately called for a break. Afterwards he rebuked Maher for his outburst explaining that the Board was there to make a decision on the well, that interveners can ask questions and evidence can be cross-examined, and that if the

cross-examination is out of place then it is up to Polaris counsel to object. "The problem we are having this afternoon, Mr. Maher, is that you're taking the role of counsel and this Panel and the Board does not appreciate that. Certainly we don't appreciate a lecture on how we should run our business, because indeed this is what we are here to do, to recognize the public interest and hear from everyone. We want to be impeccably fair about that."

However, O'Ferrall jumped up and went into a long tirade about how the process itself was at fault. He argued that the Board had no right to deny an application if all the rules had been followed, that Cabinet can overturn an EUB decision, that the Board's own rules are not being followed, that the pre-

hearing meeting did not limit the scope of the hearing enough, that they came out of that meeting with more issues than they went in with, and that if parts of the application were inadequate then they should have been dealt with prior to deciding on a hearing.

McGee replied that if the public says they are adversely affected and they meet the standards that the Board accepts "we want to hear from them...And we've never been able to say to interveners: You know, I understand that you have some issues...and you're very concerned with the safety with your family, and all of those things, but you know, those are things that we're not really interested in hearing....Our process has been flexible, and above all, it's been fair..." Fitch remarks that the Board has an obligation to hear everything because the Energy

Resources Conservation Act says that the Board must give consideration to whether the project is in the public interest, having regard to the social, economic and environmental effects of the project.

The next day Maher interrupted the proceedings with a tearful apology. "I just want to apologize to the Board, but more importantly to the people.... I'm sorry if I tried to especially restrict the community's appreciation of what we are trying to do here." He said that a resident had explained to him that although a hearing can get pretty boring at times, this was their only chance to listen and provide input. The EUB staff actually clapped at this apology. Everyone was tired of Polaris's aggressive exclusionary tactics.

The Public Interest – Battle of the Polls

How can we define the public interest? AWA's submission explored this difficult topic. One of the ways of determining



James Tweedie, a local resident and intervener and his counsel, Richard Second.

public interest is to gauge public opinion through an opinion poll. AWA commissioned Dunvegan Group of Calgary and worked closely with them to develop the following question:

"There is an area in southwestern Alberta, which is called the Whaleback. It is named after a series of ridges and hills that look like the humped back of a whale. This is public land – meaning it is owned and controlled by the government. The Whaleback area is about 100 square miles; it is the largest and least disturbed natural habitat of its type in Canada. It contains forest and grassland – it is inhabited by large elk herds, grizzly bears and eagles. Traditional ranching and cattle grazing is carried on in the area today. There are petroleum resources, in the Whaleback area, which are of interest to oil and gas firms. In 1999, the Alberta Government protected much of the Whaleback area by creating the Bob Creek Wildland Park and the Black Creek heritage Rangeland. Logging, mining and oil and gas development are not permitted in these areas. Today an oil and gas company is asking the Alberta Energy and Utilities Board for permission to drill an exploratory sour gas well, on private land, less than one kilometre outside the boundary of the protected area. Sour gas is a form of natural gas that has a high content of hydrogen sulfide. Now, I would like to ask your opinion about this situation – I would like you to tell me whether you are in favour of or opposed to "the proposal that sour gas drilling be permitted in the immediate vicinity of the Whaleback protected area?"

Two thirds of Albertans opposed the project. The poll consisted of one question that asked specifically about drilling for sour gas in the immediate vicinity of the Whaleback protected area and used descriptions from the government's own documents. They were not asked abstract or general questions about their attitudes towards the environment or the effects of industrial developments on environmental integrity.

Dr. Ian Urquhart of the University of Alberta, who presented AWA's submission, said, "I believe the results send a powerful message about the willingness of Albertans to support measures prohibiting sour gas drilling from taking place on private property. They are very suggestive of a widespread belief held by Albertans that when risks are posed to a public treasure such as the Whaleback, the public is willing to pass up whatever economic benefits might result from oil and gas exploration....If it was not in the public interest to drill for sour gas when the Whaleback was a candidate for protection, how can it now be in the public interest to drill for sour gas here, given the proximity of this particular proposal to the established protected area."

In their rebuttal evidence Maher triumphantly trotted out a poll that Polaris had just done that apparently showed that most Albertans were in favour of gas development even in the Whaleback. The poll had at least 6 questions, most quite general. Secord led Maher through each of the first 5 questions and Maher agreed with him that most people had answered yes to them. "Kind of like the pollster is sort of

leading...., "suggested Secord. "Like Pavlov's dog," volunteered Maher.

Their question on the Whaleback stated: "The Whaleback protected area is an environmentally sensitive area in Alberta comprised of Bob Creek Park and Black Creek Heritage Rangeland. The area has been protected by the Alberta government against development. However, there are proposals to drill for natural gas outside of the protected area on privately owned land adjacent to an existing public road. Some argue that drilling for natural gas on private land outside this protected area can be done safely and with minimal impact on the environment. They also argue that drilling for natural gas is important for Alberta's economy and the best way to guarantee a secure and affordable supply of natural gas for all Albertans. Others argue that this protected area is in an environmentally sensitive area and drilling for natural gas anywhere near the area should be restricted. What position best reflects your view?"

There was no mention of sour gas or the proximity of the well to the protected areas. Secord noted that the results said that 59.3 percent support and 40.07 percent oppose. "My question to you, Mr. Maher, is: Is the support for the restriction of sour gas or is the support for the drilling of the well?" Maher's counsel jumped to his rescue saying, "Mr. Maher is not here to interpret the results. The question is at the top. The results are below that. We have never tendered Mr. Maher to say that he can speak to what these particular results mean and the methodology means...The poll stands for what it stands for." I suggest that if Maher cannot understand his own poll then how could anyone else be expected to?

Environmental Concerns at the Wellsite

The wellsite is 1.4 km from the public access road. The site, chosen largely by Cross, the landowner, is a wet meadow with a seepage in the middle of it. Polaris had no detailed plans for how they would develop the wellsite or handle the flow of water. Heavy precipitation and sudden floods are not unknown. The potential for contamination of the area's water was of great concern.

Polaris plans to turn a little used track into an industrial grade road. Would the road increase access into the Whaleback? Polaris said no because the road would have a gate and a no trespassing sign. Surely Albertans were law-abiding and wouldn't trespass. But Glaholt admitted, "It's a symbolic gate. It's not a fenced range."

Glaholt's report hardly addressed cumulative effects at all. In fact, Polaris argued that the interveners did not understand the term and that there was no point discussing the effects of a pipeline when it was not even known if the well would be successful. Residents disagreed. Proposed pipeline routes would pass very near their houses and sour gas pipelines were notorious for having leaks. Glaholt suggested that if people knew what the future held, if they could be assured of the



maximum extent of the development, a consensus might be reached.

Polaris argued that reclamation of wet site was ten times easier than at a dry site, but Wershler, Tweedie's environmental expert, who had studied the Whaleback area extensively, said "reclamation will take a long time and will not satisfactorily replace what natural habitat will be lost...in this part of the world, it's never been proven that you can reclaim native grassland to what it was." Wershler said that a full-fledged EIA should have been done for this site, given its significance. He noted that the environmental report lacked a proper literature review, made no reference to substantial important studies on the area, and had many other deficiencies, possibly due to lack of money.

Towards the end of his cross-examination, Secord revealed, much to the consternation of Polaris, that Glaholt had nominated the Whaleback for Special Places in 1997. In his nomination one of his concerns was "maintenance of viable ecological linkages to adjacent areas, which implies co-operative and sympathetic management both within and adjacent to the area [nominated]." Among unacceptable uses were "oil and gas development which requires road development. Other significant terrain disturbance, forest removal, establishment of surface facilities or frequent visits." Maher tried to do some damage control by insisting that his well was not adjacent to the protected areas.

Technical and Financial Viability of Polaris

Polaris has no employees. It has a president and shareholders. It's main partner, Ricks Nova Scotia, with 50%, walked away from the project ostensibly because of the high regulatory costs. The last straw apparently was having to pay intervener costs. Knight Petroleum has a 25% share but intended to farm out part of their interest to raise money. Polaris has no insurance. They have not drilled any wells in Alberta and no sour gas wells anywhere else. They don't operate any of their other projects.

Polaris stressed they had a strong experienced team. However, it was noted that the team had changed substantially in just the past few months and even during the drilling phase not all team members would be working from the same office. Experienced oilpatch members of the ORC were concerned about the lack of depth in the company. If something went wrong, who would they call? In fact, who would residents call if they had concerns, because all they got at the Polaris office was voicemail. The problem with the team concept is that problems can always be blamed on someone else.

Polaris finally released their safety manual, only because Shell had also given their manual to the EUB. Maher was concerned that his manual would be plagiarized by other companies who didn't want to spend the \$20-30,000 that he did. "I think there are some things that we think make us a little bit better than other companies, and we don't want to always put them in the public record," said Maher. But the

Board wanted the manual because "Polaris has placed some potentially significant relevance on the contents of this manual as evidence of Polaris's commitment to safety and good practices."

The section on sour gas is two pages long and Maher did not know what levels of sour gas were dangerous or fatal. His manual was over 20 years old but had been updated periodically by consultants. Here is an excerpt from this manual to let you judge for yourself: "Don't pressure yourself into doing it all – lots of us would like to help! Give us a phone call....Take statements from key witnesses – it gives people something to do....One is never as smart as a lot of people together...Over-react rather than under-react."

Summary

The ORC concluded their submission with the following: "The Board is now being asked to complete unfinished business...The citizens of Maycroft urge the Board to undertake this task given it with courage and wisdom. They ask that the Board provide a clear signal, once and for all, that oil and gas development in the Whaleback is not appropriate. They respectfully request that the Board deny Polaris's applications and to do so in such a manner that this issue is laid to rest once and for all." 🍁



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SAVING THE ENDANGERED FORESTS OF PRIMROSE-LAKELAND

By Laurie Wein, AWA Conservation Biologist



Northern Alberta has witnessed booming industrial development in recent years. Large-scale industrial forestry, oil and gas development and the expansion of residential and agricultural lands have all contributed to habitat destruction and fragmentation, and have resulted in a consequent loss of plant and animal species across the boreal.

Yet the boreal forest provides crucial ecological services – climate regulation, water and air purification, carbon sinks, watershed protection, nutrient cycling and storage, soil formation and stabilization. Damaging industrial activities occurring in the Primrose-Lakeland region threaten such services and put ecosystem and human health at risk.

AWA feels that the time is right to mount a campaign that will raise awareness of these ecological services and to launch a discussion on how best to guarantee their functioning in the Primrose-Lakeland region. Our campaign for this area will take a slightly different tack than previous campaigns, and will focus in large part on extensive public consultation that will bring forward local community concerns for the region – environmental, social and economic. AWA hopes this campaign will serve as a valuable test case for conservation action through local community involvement for other areas of the province.

Stretching across 6000 km² of boreal forest, the Primrose-Lakeland area lies east of the town of Lac La Biche and overlaps the Cold Lake Air Weapons Range. In 1998, a provincial government report entitled *The Boreal Forest Natural Region of Alberta* deemed the area one of the best representative examples of the central mixedwood sub-region.

Containing one of the most extensive and diverse upland-lake complexes in the province (over 200 lakes total), the area provides critical habitat for moose, deer, lynx, river otter and timber wolves. Forests of aspen, spruce, jack pine, balsam poplar, paper birch and fir are interspersed with wetlands of black spruce bogs and communities of willows and sedges.

Old-growth spruce-fir forests support several old-growth specialists such as the fisher and the provincially endangered Primrose Range Woodland Caribou Herd. Over 200 bird species also occur in the region, including many rare and declining

neotropical migrants such as the Connecticut warbler and the old-growth dependent blackburnian warbler. Water birds abound.

A visit to Primrose-Lakeland might reward you with sightings of common loon, western and red-necked grebes, American white pelican, double-crested cormorants, osprey and bald eagles. If you are very lucky, you might even spy one the area's two species of rare adder's mouth orchids, the white and the bog.

Like many areas in northern Alberta, Primrose-Lakeland is under threat from a variety of extractive industries. Of particular concern is the transition between Alberta's Green and White zones. It is here that marginal forestlands, which are often of great importance for biodiversity, are converted to agricultural cropland. Often this conversion results in deforestation, habitat fragmentation and the loss of wetlands.

The same 1998 provincial government report has stated that the entire southern dry mixedwood region will be totally deforested by 2060 and that the annual rate of deforestation here is greater than that of the Amazon. Intense petroleum development, logging, encroaching residential settlements and unlimited recreational off-highway vehicle (OHV) use only compound the problem.

Old-growth forests in the region are particularly at risk as Alberta's Operating Ground Rules target so-called decadent stands. Rotation ages in Alberta of 80 to 120 years for conifer and 50 to 70 years for deciduous stands mean that old-growth forests that are cut will never be able to replace themselves, while silvicultural practices such as mechanical site preparation and

herbicide use result in the disruption of soil and hydrological processes.

In light of these trends, we are at risk of losing old-growth forests and High Conservation Value Forests (HCVF) in Alberta. Indeed, many in the environmental and scientific communities argue that old-growth and HCVF forests should be considered *endangered forests*. Such concerns are particularly salient when considering the current forestry activity in Primrose-Lakeland.

Alberta-Pacific Forest Industries Ltd. occupies 58,000 km² of Crown land as its Forest Management Agreement directly north of Lakeland Provincial Park and the adjacent provincial recreation area. Earlier this year, Al-Pac and Vanderwell Contractors proposed to begin harvest operations between the north boundary of the provincial park and the Touchwood Lake road.



Mixedwood forest - Touchwood Lake Road.



While AWA and partner ENGOs opposed the proposed logging and succeeded in negotiating a harvest deferral for the area, we remain concerned about any logging here because of the presence of self-perpetuating, old-growth mixedwood forest. The area is also excellent habitat for neotropical migrant birds and has several popular hiking trails such as the Mile 12 trail to Jackson Lake.

In addition to forestry activity, there remains intense oil and gas development in the Primrose-Lakeland region. Existing leases continue to be honoured in the provincial park and in the neighbouring provincial recreation area. Officially, no new leases can be granted for surface disturbance within these areas, but the greater Primrose-Lakeland region has extensive linear disturbance from seismic lines and right of ways.

Exploration for oil and gas is of paramount concern to AWA because of damaging practices such as forest clearing for the construction of well sites, gas plants, compressor stations, pipelines and access roads. Construction of such infrastructure can lead to increased sedimentation in watercourses resulting in destruction of fish habitat and contamination of water and soils by oil or gas leaks. Well blowouts and gas flaring pose additional problems for ecosystems, wildlife and human health in the region.

Unlimited motorized access and recreational off-highway vehicle (OHV) use also threatens the ecological integrity of the Primrose-Lakeland area. Currently, OHV use is permitted in both the provincial park on designated trails and within the provincial recreation area and environs. OHV use can lead to vegetation damage, soil erosion and compaction, and damage to water crossings and streambeds. Noise pollution from such activities can also disrupt sensitive wildlife populations, especially during critical times like breeding and nesting.

Lastly, recreational and commercial fishing continue within the Primrose-Lakeland area and have resulted in depleted fish stocks in many of the region's lakes. Recreational boating and supersonic jet flights from the Cold Lake Air Weapons Range can also affect the health of wetland ecosystems.

While Primrose-Lakeland is faced with a glut of ecological threats, it remains a strong candidate for protection. *The Boreal Forest Natural Region of Alberta* prepared by Alberta Environment for the Special Places 2000 Provincial Coordinating Committee recommended that Primrose-Lakeland be considered as one of the province's Prospects for Protection under the now defunct

conservation program.

The area contains the largest provincial parks system in the boreal forest region, which encompasses Primrose-Lakeland's most extensive undisturbed areas. In 1992, the Alberta government designated the 147 km² Lakeland Provincial Park as the flagship of the Special Places 2000 initiative. An additional 443 km² east of the park received the lesser designation of Provincial Recreation Area.

Yet currently, the remaining 5,400 km² has no protection. AWA feels that protection of old-growth forests is crucial to preserving the ecological integrity of the Primrose-Lakeland region.

The lack of data on boreal ecosystems means that we still have only a rudimentary understanding of biological ecosystems within the boreal forest zone. Yet the precautionary principle suggests that when industrial or anthropogenic activities threaten, or are perceived to threaten, the environment or human health, precautionary measures should be adopted *even in the face of scientific uncertainty*. AWA feels strongly that

protection of the old-growth and HC VF forests of the Primrose-Lakeland region must take the precautionary principle into account. We simply do not know how much industrial development the region can stand, but already we are seeing evidence of ecosystem deterioration.

AWA has recently secured a generous grant from the Richard Ivey Foundation that will support our Primrose-Lakeland campaign. While the campaign builds on AWA's continued mapping of our

Areas of Concern, it will focus first on identifying where remaining old-growth and HC VF forests exist in the region. By continuing to work closely with our partner ENGOs at both the provincial and national level, we will ensure that the best possible data is collected and mapped.

Once old-growth and HC VF areas are clearly identified, AWA will initiate an extensive public consultation process in which we will

engage government, industry, local communities, First Nations and the scientific community. By encouraging the involvement of local communities especially, AWA hopes it can bring local understandings of the benefits and values of old-growth and HC VF forests, and the ecological services these provide, to the fore. In doing so, we hope that all stakeholders can reach an agreement on how such values and benefits can be used to inform future management plans for the region. 🌿



White sucker spawning stream damage - Touchwood campground.



Wolf Lake Compressor Station.

WILDFIRE PRESENTS A RARE OPPORTUNITY!

By Dr. Brian L. Horejsi



As the Lost Creek fire darkens the skies of southwest Alberta and the wind washes the land with an air of power and wildness, it's not easy to realize that the origins of this fire go back over half a century: back to the 1930s when the provincial government began co-management with the federal government of what was then the Rocky Mountain Forest Reserve. These seemingly vast tracts of the Rocky Mountains had been set aside for watershed protection, but it was not long after the province got into the act (1930 Natural Resources Transfer Act) that they began to think dollar signs.

The big fires that roared through the Rocky Mountains around the 1930s prompted construction of the forestry trunk road (Waterton to Hinton, beginning in 1948), built almost exclusively to provide access to the forests for forest fire "prevention." The Forest Service took on their new role as fire fighter with a vengeance, and by that measure they have done a heck of a job. The result is massive build-up of fuel brought about by almost complete suppression of the multiple smaller fires that historically occurred in these areas every few years.

In other words, the Lost Creek fire is a mess of the Forest Service's own making; the product of narrow-minded, autocratic mismanagement of public lands stretching more than 50 years! As is inevitably the case with bureaucratic bungling of this magnitude, someone gets stuck with the tab, and that's almost always the taxpayer. And just as dastardly, innocent people lose their property, have their lives disrupted and suffer unbearable stress.

Our mountain and foothill forests evolved with frequent fire, but the Alberta Forest Service decided not to manage for the natural diversity of forest landscapes; instead they chose to fight the design and processes of nature. No fires! The reason, of course, was to protect "timber," not forests. The beneficiaries of this bureaucratic largesse were the timber companies, who had situated themselves as the Forest Service's largest and most aggressive constituency. The public was then, and is still today, virtually excluded from decisions about goals for and management of public lands.

Part of the strategy of "preventing" wildfire, which has shaped and renewed these forests for centuries, was to log those old forests

like hell – after all, according to the Forest Service, they're unproductive and dying, and aggressive logging means less fuel for fires – and graze like hell, because grass and understory shrubs were viewed as stepping stones to forest fires, so less grass meant less fuel. So were born two strong Forest Service constituencies: the timber industry and the forest reserve/public lands livestock industry.

This triumvirate has dominated the public and public lands management for half a century! We cannot expect them to acknowledge that the propaganda they've sewn and the public perception they've built – that logging and grazing are good for the

forest and would prevent "destruction by fire" – was wrong. And they have not surprised us by "coming clean," but this fire most assuredly debunks that nonsense, just as the big fires in the U.S. in the late 1980s debunked the same propaganda in that country.

The ecological costs of this "log, graze and fight" fire policy are immeasurable: virtual eradication of old growth forests, degraded fish and wildlife habitat, mass upset of biological diversity, massive watershed restructuring, total disappearance of vast stretches of wilderness, an oppressive network of roads and trails, erosion, rampant weed problems, and on and on! Our foothills and mountains have been mismanaged into a playground for industry, motorized disruption and runaway fires!

But the costs don't stop there; the taxpayers of Alberta have provided hundreds of millions of dollars and Cabinet routinely issues special writs

for cash infusions, and all are basically a subsidy to the old boys constituency of timber and agriculture. Please remember that these are largely unoccupied public lands we're talking about, and few of us live on or near them.

Who does this massive expenditure for "protection" benefit most? It is no wonder the Forest Service has worked religiously to throw the fear of the devil into the public about wildfire, to make the case that fires are "destruction" as opposed to natural renewal, and to be sure no questions are asked when they put on standby an air force and army ready to pounce on each spark!

When I look at this fire, I see reflections of an outrageous waste of money, an organization that fabricated a (false) aura of sound management and invincibility (this fire has punched that full of holes), an organization that falsely fuels the public apprehension



Recovering burn near Caroline.



about fires, an organization that resisted public accountability, and an organization that is in dire need of reform.

What do I mean when I make the statement "resisted public accountability?" The Forest Service could not continue to serve their historical constituencies and still listen to the modern public, because the public had started to talk about protecting wilderness, fish and wildlife, biological diversity, visual landscapes, wilderness and that elusive "ecological integrity."

Basically, the public was saying, "We want to be part of the process; these lands belong to us!" These are frightening issues to an old boys organization that has developed way too cosy a relationship with timber, grazing and road building special interests. So the Forest Service insulated themselves from public input.

In spite of this institutionalized resistance to change, even the Forest Service could see that the forest industry was withering away; after all, the cheapest trees to cut and mill, the large old trees that we call old growth, are essentially gone. What would happen to this massive bureaucracy that planned clearcuts, built roads, and flew an army of planes and helicopters on watch for that evil monster, fire? Could off-road motorized invasion of public lands be a substitute constituency? After all, public lands are fragmented by a huge network of roads, and motorized users were people who care little about ecological values and function. A perfect fit for continued industrialization of the Rocky Mountains!

It would be naive to think that humans will not use some parts of public lands for activities that are essentially destructive to natural systems. But there would be widespread tolerance for these uses if the ecological, social and economic costs did not exceed the limited benefits and if, and it is a critical if, they took place within a well-regulated framework that did not permit the destruction of other values and the abuse of other users.

That, however, is not what we have! What is going on is indifference and disregard based on "I don't care what the other guy is doing as long as I get my piece of the action!" Public lands are, in my view, the most valuable asset that Albertans have in common, but with this kind of abusive management dominating public lands, it is small wonder that the "commons" have become the dumping ground for destructive uses and practices.

What about the Lost Creek fire? Put aside for the moment the fact that the Forest Service created the conditions that brought it on. As is so typical of Alberta government organizations, they are provincial (as in narrow minded), poorly informed, inward looking, and resistant to information and outside experience and understanding.

The fires of Yellowstone taught people that a fire like the one we have now – huge fuel buildup, perfect burning conditions – is invincible; the solution is to concentrate organizational "firepower" (sorry for the pun) on structures and specific areas that are to be protected. The hundreds of dumps of retardant and water have done nothing to alter the fire's course – they've simply squandered tax dollars and endangered lives. This is a fire that requires a strategy and discipline, focussed when and where there is an imminent threat to property.

And there is a message here for Forest Service partners in crime: municipal governments that promote development in forest areas! "Get your lawyers lined up" is what I'm expecting they may have to do! But more importantly, the public is going to have to significantly curb the powers of municipal governments so that developments that are at high risk of destruction by fire cease to be approved.

And finally, another battle looms: salvage logging, during which the Forest Service will strive once again to serve its favourite constituency, the timber industry, by trying to do damage control with the management mess it created. I imagine the plans to cut and road even more are already being formulated.

The Lost Creek fire, and those yet to come in many parts of Alberta and our national parks, are the results of cumulative and

multiple mismanagement of public lands. But perhaps out of the ashes will rise a rose. It would be history-in-the-making if Albertans were to look upon these fires as the start of something good. Ecological renewal in our forests, a process that has been suppressed for half a century, could begin if it is not "managed" to death.

There are great days ahead for wildlife populations, whether you are a watcher, dreamer or hunter. But the most shining opportunity, the real pot of gold, is an opportunity that is rarely presented

to any society. We have a once-in-a-lifetime chance to impose the rule of democracy and reform the Forest Service, or eliminate it and start over with a Natural Resource Conservation agency that is controlled by legislation and legally accountable to the people of Alberta to manage public lands for native biological diversity, water, wildlife, wilderness, a gentle mix of recreational options and some commodities.

I am not prepared to believe that it is utopian to expect that public lands should be managed for this and future generations as places that have all the parts and all the processes of naturally viable landscapes. I hope Albertans will come to the same conclusion.

(Dr. Brian Horejsi is a forester and wildlife scientist and a former Crowsnest Pass resident.) 🌲



Burned areas in Lost Creek.



FANNING THE FLAMES: FORESTS IN PERIL

By David McIntyre

The problem surrounds us and spreads beyond the horizon. Its roots are tenacious, anchored in the bedrock of tradition and politics. All across North America, decades of mismanagement and public brainwashing have set the stage for the inevitable: catastrophic forest fires and devastating insect infestations.

The cost grows with each passing year. Already, it has an annual price tag that's measured in hundreds of millions of dollars and lost lives. But tradition runs deep and the false dragon will be a tough beast to slay!

Fire is the problem. More accurately, it's the lack of fire, a phenomenon created by the ongoing suppression of natural fires. And it's this very absence of fire that's generated a colossal buildup of fuel amid a monoculture of old, increasingly insect-vulnerable forests. The situation has grown so acute that if fire doesn't get the trees, the insects will, or the insects will start a cycle that culminates in fire.

Society has long passed the period in which it can needlessly fight an imaginary foe. Sure, there will be forest fires that must be fought in order to protect homes and lives, but we must simultaneously walk away from the era where careers were launched just to engage in needless battle, one that brought its combatants a false sense of pride and glory. Today we must learn to fight only an enemy that is real!

Foresters and wildfire specialists are beginning to quietly acknowledge the mistakes of the past. More vocally, these same people are actively working to convince the public – and the politicians – that controlled burns are essential in order to create a safer and saner situation (one more akin to what nature would have created at no cost). But taking the let-some-fires-burn road isn't going to be a simple task. And it's going to run head-to-head with colossal wildfires that we've paid to see delivered to our doorstep!

It's going to be easier to slip a greased politician through the eye of a needle than it is to re-enter the kingdom of honest control. There are too many obstacles, perhaps the greatest being the need to convince the public at large of the absolute need for wholesale change. Almost certainly society will wallow in indecision and down-slope momentum before the wheels of "reverse" can stop our slide into a hellish abyss.

Fire suppression as it's been practiced during past decades isn't a practice without harmful side effects. And it isn't sustainable! When the natural fire cycle is altered – and almost every North American forest has its own natural and predictable regime of fire – the amount of combustible material accumulates to frightening levels. Each year that a forest survives without a fire creates a situation in which we can expect an increase in the magnitude of the fire that ultimately erupts. When a fire finally takes hold to rage across the landscape, and it will, the result will explode in close relationship to the amount of fuel that

has been allowed to accumulate. It's as simple as that!

A year that delivers late snow and normal moisture might be seen as a safe return to a fire-free season. Instead, we should view it for what it really is: a year in which more fuel is added to the fires of the future!

History would reveal that society's inability to manage its public lands originated almost as soon as these lands received official designation. Treed land was universally seen as land harbouring little more than wood and wood products. It didn't really matter whether these lands harboured productive reserves of wood or not. Society almost always found a way to deliver what was viewed as a viable forest industry.

This perception of value was created even if hundreds of millions of dollars in government money – "free money" – were used to balance the equation. Little thought was given to the land's other values, those relating

to wildlife, water, aesthetics or recreational pursuits. Views are changing, but not in pace with need or reality. It's the trees themselves that, regardless of their actual value, still command centre stage. The other attributes of the land, even if they are of far greater worth, inevitably have a way of appearing to deliver only secondary or tertiary

benefits ... if they receive recognition at all!

Within this topsy-turvy, willy-nilly value system, it's interesting to know that the U.S. Forest Service recently discovered, within one sweet little example, that the annual value of the huckleberry crop growing amidst one of its most valuable timber producing regions (in the state of Washington) was actually worth twice as much as the surrounding forest! (That same agency has, of course, been a leader in the suppression of naturally occurring forest fires and, as a result, had actively authored the demise of huckleberries – their very presence created as a byproduct of fire!)

Foresters have ultimately come to control the management of most public lands, even if an honestly profitable forest industry was never anything more than a

paper dream. Individuals could still make money – and they have – regardless of the actual viability of the resource. And the process appeared to work, except in a sane way and for society as a whole. The result is somewhat like asking your barber or hairdresser – not your doctor – to manage your body for the production of hair. (Of course, in the real world, barbers and hairdressers do give more whole-body advice than most doctors, so the point is probably lost.)

The only true means of assessing a forest's economic viability is to quantify the values associated with the harvest of its trees. In order to balance the equation, it is important to subtract all revenue options that are being lost due to the current management focus. We must also subtract the cost of firefighting as well as the cost of the government's multi-layered



The stark outlines of burned trees in Lost Creek.



WildFire



teams of management and field staff. The results might be surprising!

Society can't expect foresters to have a complex understanding of the full spectrum of diverse resources that exist within forested lands. It is expected, however, that forest guardians know everything that needs to be known about the trees within their jurisdiction. That assumption wouldn't always appear to be valid.

Many U.S. states and Canadian provinces have attempted to identify – through assessments of aerial photographs coupled with on-the-ground reality checks – the precise composition of their forests. The results of this effort – maps comprised of many puzzle-like pieces – have been widely heralded as the defining picture of each forest and its primary, species-by-species tree composition. These same maps continue to be used as the foundation for other studies, such as those pertaining to water or wildlife.

When I was asked to use these maps as the basis for a research project, I sought to conduct several reality checks of my own. The results were staggering. Within minutes, I'd discovered glaring errors. Huge areas were incorrectly catalogued and other forested land, very present in the real world, was simply absent from the maps. Even highly conspicuous forests, including huge old stands of Douglas-fir, tended to "disappear" from the "new" and "sanctioned" picture.

I have no knowledge suggesting that the noted errors – seemingly the tip of a continental iceberg – have been corrected. But why were the maps inaccurate? Was it due to a lack of knowledge? Was there a pro-logging bias, ... or was the reason more insidious?

I do believe that most of the people employed to manage the public domain do their best, within their knowledge and experience, to fulfill the obligations of public trust. The problem, it would seem, is that the politicians entrusted to safeguard this same resource aren't being apprised of the truth or are failing to act upon the knowledge at hand.

Maybe everyone is simply too busy doing daily "busyness" to do a good job, or perhaps it's simply easier or more self-serving for a select few to keep the current Gravy Train on track.

(Meanwhile, the word's out that Smokey the Bear, that ageing veteran of forest fire suppression, better stick close to his government office. Real bears, with a real message, are known to be lurking in the shadows! They're poised and ready to rip a few holes in Smokey's overrated hide should the animated, shovel-wielding bearer of arcane messages wander just one step too far from his manicured domain, and one step too close to the sterile and dangerous forest he's worked to create.)

(David McIntyre writes from his home beneath the Livingstone Range in Alberta, Canada. He has Masters of Science from the College of Forest Resources, University of Washington.) 🍂

"Fanning the Flames" was written prior to the 2003 fire season. This past summer the Lost Creek fire gained national attention as it raged over the landscape toward the community of Crowsnest Pass, AB and the author's home. Thousands of people were evacuated. The fire was eventually contained at a cost estimated to exceed \$50 million, roughly \$1,000/acre burned.

Fire suppression efforts left a legacy of more than 400 km of bulldozed fireguards and a litany of related scars.

Perhaps most surprising: the high altitude, slow-growing forests of southwestern Alberta have never been shown to support an economically viable forest industry.

WRAPPING UP THE 2003 BIGHORN MONITORING FIELD SEASON

By Laurie Wein, AWA Conservation Biologist

At the end of September Lara Smandych and I completed the last component of the 2003 field season for AWA's Bighorn Recreation Use and Monitoring Project. This was the first field season of several that aim to monitor the level and intensity of recreational activity in the Bighorn Wildland region adjacent to Banff and Jasper National Parks. We hoped that the project would document the extent of environmental damage here and create a research presence that would discourage illegal and inappropriate use.

Preliminary results suggest that our data will provide insight into how various types of recreational activity impact habitat quality and landscape connectivity at the regional scale. We are happy to announce that the project is off to a great start and that this year's field season has resulted in good baseline data that will be instrumental in assessing how such activity is affecting ecosystem health in the Bighorn Wildland.

Concentrating in one of the Forest Land Use Zone, the field season has included five trips ranging in length from four to ten days. We travelled by foot with backpacks for over 400 km, consumed more beans and instant mashed potatoes than I ever care to experience again, and established over 70 permanent data collection sites. We measured depths and cross-sectional areas of rut events, assessed vegetation and structural damage, examined trail widths and braiding, calculated slope, and noted evidence of animal activity. We also recorded encounters with illegal OHV use and noted the presence and absence of appropriate law enforcement personnel.

AWA has been very fortunate to have several volunteers join us in our stewardship and monitoring work over the course of these field trips. Without their willingness to participate and their hard work, we would not have succeeded in accomplishing as much as we did this summer. Thanks especially to volunteers Rod Burns, Steve Swettenham, Cheryl Smyth, Deb Code, Florian Ruecker, Dave Argument and Darren Bezushko. Two of AWA's directors, Heinz Unger and Ian Urquhart, also joined us on field trips and provided us with helpful suggestions on improving the project. Of course, the AWA Bighorn Monitoring Project would never have materialized without the incredible work done by Tamaini Snaith, former AWA conservation biologist, who generated the research proposal and completed the project design.

We hope that the positive experience we have had with the Bighorn Monitoring Project this year can be replicated for next year's field season. Although much work remains to be done for a project of this magnitude, we feel that such monitoring is essential in ensuring the protection of this spectacular piece of Alberta's wild heritage. 🍂



Darren Bezushko, Dave Argument, Laurie Wein and Tipper.



CONSERVATION GROUPS UNITE TO FIGHT MILK RIVER DAM PROPOSAL

By Nigel Douglas, AWA Outreach Coordinator

Alberta Wilderness Association has joined forces with WildCanada.net and Earthwild International to oppose any dam construction on the Milk River in southern Alberta. A feasibility study on a Milk River dam is currently underway, and these groups are working together to help Canadians become more involved in helping to protect our river heritage and fight projects such as this. A new Endangered Rivers Web site has been launched to help people who want to voice their opposition to the dam proposals.

The Milk River runs through some of the least fragmented, most extensive and most diverse grassland landscapes in North America. The proposed Milk River Dam would severely damage the recently designated Twin Rivers Heritage Rangeland, providing water for low value irrigation projects while damaging a high value conservation area at significant cost to the Alberta taxpayer.

The Milk River Ridge is an internationally significant grassland, home to several species of rare or endangered fish, amphibians, birds, and plants; it is also important habitat for deer and provides nesting areas for several birds of prey and the sharp-tailed grouse. It is one of six large blocks of grasslands left in the glaciated plains of North America. Less than two per cent of Alberta's Grassland natural region is protected, and there is an urgent need for more protection of this spectacular habitat.

For more information on how you can add your name to the growing list of people opposing the dam, check out the Endangered Rivers Web site at www.endangeredrivers.net. 🌿



The south Milk River.

DRAFT MANAGEMENT PLAN FALLS SHORT IN PROTECTING K-COUNTRY'S ECOLOGICAL INTEGRITY

By Lara Smandych, AWA Conservation Biologist



The draft management plan for the Peter Lougheed and Spray Valley Provincial Parks was released for comment this summer by Alberta Community Development, Parks and Protected Areas Division. Although the draft plan presents many positive initiatives for conservation, it did not heed the call of Albertans who have repeatedly demanded no further development take place in the area.

Considering the proximity of Calgary and other centres, provincial population growth, park accessibility and available recreational opportunities, the plan offers a good foundation for the future of the area by making the primary management objective "To maintain ecological integrity and diversity and provide opportunities for outdoor recreation ...which are dependent on and compatible with the protection of the natural values found here."

This implies that the management of recreational activities must be compatible with this overall objective, thus keeping the impacts of these activities from harming the environment. Key aspects of this include the proposal that no new trails or backcountry campgrounds and facilities will be developed, off trail use will be discouraged, and no new roads and no public motorized vehicle use will be permitted.

In further efforts to maintain park integrity, the plan considers the maintenance and persistence of natural processes such as wildfire and flooding as well as patterns of vegetation. Particularly encouraging is management's intent to maintain and update an inventory of rare and endangered species in the parks. Emphasis has been placed upon critical wildlife habitat areas and corridors with specific priority given to the regional sustainability of wildlife populations, particularly grizzly bears.

Where the plan fails is in its provision for future development within park boundaries. Specifically, the 20% (current floor area) expansion at Mt. Engadine Lodge and the possibility of the future development of an additional new lodge facility. Any new facility will likely require new roads, infrastructure, and water and sewage treatment facilities.

This may not be compatible with the maintenance of ecological integrity and regional wildlife population viability, therefore conflicting with the primary objective of the draft plan. Furthermore, the proposal for potential new development clearly ignores the wishes of the majority of Albertans who have repeatedly said in many polls and surveys that they do not want to see any new development in Kananaskis Country. 🌿



TWO NEW US STUDIES INTO CWD HAVE IMPORTANT IMPLICATIONS FOR MANAGEMENT

By Vivian Pharis, AWA Director

Veteran deer researchers Beth Williams and Michael Miller of the Colorado Division of Wildlife's research centre, in a September 4 article in *Nature*, indicate that chronic wasting disease (CWD) is very contagious in mule deer and it acts much like its sister prion disease scrapie in being transmitted from animal to animal and probably from soil to animal. In their article, the two researchers cite other scientific work showing that prions accumulate in gut-associated lymph glands – possibly gathering there for extrusion from the body. Findings presented at the recent national meeting of the American Chemical Society in New York City by University of Wisconsin chemist Joel Pedersen indicate that prions have an affinity for clay soil particles and stick to their surfaces.

The Colorado research centre's captive mule deer herd had been infected with CWD in the 1960s (possibly originally from sheep infected with scrapie). That herd was eventually eliminated and the facility was left free of mule deer for five years. However, new uninfected deer introduced in 1990 were developing CWD by 1994. Two groups of nine fawns were then studied, one raised from CWD-infected mothers in the centre's herd and nine that were brought to the station from uninfected wild mothers. In less than two years, all nine of the

research centre fawns had contracted CWD and eight or nine wild fawns were also infected.

CWD is now established in wild deer herds in about a dozen U.S. states, and in 2002 it spread east of the Mississippi River into Wisconsin. That state is planning on killing 30,000 wild deer this year in a bid to stop the spread of CWD. Saskatchewan and Alberta, two provinces with CWD in captive deer herds, are also finding infected wild deer. Mule deer and elk tend to herd together at certain times of the year

and it is feared that such behaviour will contribute to the spread of CWD in the wild. But is mass eradication, such as carried out in Saskatchewan and now in Wisconsin, the answer to controlling CWD in the wild? Some researchers say mass shootings may disrupt the

social structure of herds and cause survivors to wander and new deer to move into infected areas.

For Alberta and Saskatchewan, getting rid of the source of the infection (game farms) and keeping infected areas fenced off from wildlife for many years remains the economically smartest option, before CWD becomes widespread in the wild. But recent requests to the Alberta government to move in this direction have been met with indecisive answers. ❁



Game farm east of Trochu with white-tailed deer.

NEW WEB SITE FOR PUBLIC LAND INFORMATION

from Alberta Government Information Bulletin, September 3, 2003

Recreational users can use the Web site to obtain leaseholder contact information based on land location. Under new legislation proclaimed July 10, 2003, the *Agricultural Dispositions Statutes Amendment Act 2003* (Bill 16), recreational users must contact the leaseholder before accessing the land. Leaseholders can also specify on the Web site if they don't want to be contacted prior to a visit.

The new Web site, <http://www3.gov.ab.ca/srd/land/recaccess/publiclandaccess.html>, includes information on the new legislation and regulations. The Alberta government also launched a toll-free telephone hotline (1-866-279-0023) in July that Albertans can call for more information about accessing public agricultural land.

The legislation requires leaseholders to provide reasonable access for recreational users on foot, unless certain

circumstances exist. For example, access may be restricted if a provincial or municipal fire ban is in effect. Leaseholders can specify if they don't want to be contacted prior to a visit.

Alberta has about 100 million acres of public land in total, including about five million acres of agricultural land leased for grazing and cultivation. Most of this land is in the White Area or settled portion of the province. Lands in the forested foothills of southwestern Alberta under forest grazing allotments are not affected by the new legislation.

For further information, contact Anna Kauffman, Public Affairs Officer, Communications, Alberta Sustainable Resource Development, Edmonton, (780) 427-8636. Dial 310-0000 for toll-free connection. ❁



WOLF CONTROL, KEYSTONE SPECIES AND OTHER LOGICAL CONSERVATION CONUNDRUMS

By Mark Hebblewhite



Wolves never seem to fail to elicit the broadest responses from humans compared to any other animal, and Alberta is no exception. Both praised and demonized for the same trait of killing efficiency, wolves truly epitomize the saying that beauty is in the eye of the beholder. What is it that makes wolves so controversial?

What specifically is it about wolves that drives such a diverse array of public opinion?

I recently attended the international World Wolf Congress in Banff hosted by the Central Rockies Wolf Project. These sorts of questions were the focus of the Congress; indeed, the Congress theme was "Bridging science and community." Well-known wolf biologist Dr. Dave Mech posed a difficult question during a panel discussion about wolf control. He asked what it was about wolf control that made it the most controversial of the many subjects of wolf management. This question has present-day relevance for Alberta and Albertans.

Across much of their range in northern Alberta, wolf management is controversial. Boreal caribou are declining, and evidence is mounting that wolves may be the proximate cause. In the Eastern Slopes, groups such as the Wildlife Enhancement Society are making calls that the only solution to save Alberta's big game is a return to strong wolf control measures. Meanwhile, last winter in Calgary a candlelight vigil was held in memory of two national park wolves that were legally trapped outside the park in B.C. In this brief article I hope to review some of the findings from the conference that relate to some of these wolf management issues in Alberta.

Wolf control typically is directed at reducing the numbers of wolves to benefit species of ungulates so often prized by humans for their meat and impressive antlers. However, despite decades of wolf control research throughout North America, the evidence in favour of wolf control is not clear. In a comprehensive review by the U.S. National Academy of Science in 1997, the dozen or so scientists concluded evidence for wolf control increasing prey populations was muddled. In some populations it worked while in others, it did not. Poor study designs, weather, habitat differences or other predators could account for some of the confusion.

However, in other cases, such as the Yukon wolf control programs in the 1990s, it was clearer that wolf control, in combination with hunting moratoriums, increased both moose and

caribou populations. Mounting evidence suggests that wolves can reduce ungulate numbers, especially in combination with other predators such as bears, cougars and humans. This much seems intuitive to some; however, it remains unclear how effective predator control programs are.

This scientific uncertainty is frequently used to argue against wolf control by conservationists. However, at the congress, we heard of a conservation conundrum that has indirect relevance for Alberta. Dr. Rick Page from Vancouver Island reported on a proposed management control to reduce wolf predation on the endangered Vancouver Island marmot, now down to about 30 to 50 animals in the wild at most. He asked what should we do for an endangered species such as the marmot, which might go extinct in the coming years, partly due to wolf predation?

In the ensuing discussion, panelists and the audience pointed out that the ultimate factors were likely large-scale forestry that was changing the marmots' habitat and urged that steps be taken to halt this in key marmot areas. However, even if these steps occur, it might be decades before recent clearcuts regrow, protecting high mountain marmot habitats.

What relevance might this have for Albertans? In discussions after

the marmot debate, the example of Alberta's caribou came up. Research across northern Alberta paints a grim picture for caribou populations. Proximate causes seem to be high wolf predation on calves and females, but ultimate factors are likely forestry and oil and gas related.

Thus, Albertans may be asked in the coming decade whether wolf and other predator controls should be used to protect declining and

threatened caribou. The sad facts of the matter are that such predator controls may actually be warranted based on available caribou data if we value caribou. (Similar stories are being told in B.C.)

As with marmots, threatened caribou may ultimately be impacted by forestry and oil and gas development, which increase food for alternate prey such as moose and make it easier for wolves to find caribou by providing wolves and other predators (including humans) with convenient travel routes on oil and gas roads. These ultimate factors lead to the proximate cause of the decline – wolf predation.

However, such wolf control efforts may have to be sustained, often for a very long time, if caribou are to recover. It will take decades for forests to grow in, and perhaps even longer for forests to reclaim seismic lines. Conservation implications of this are clear – better forest and oil and gas practices – but ultimately strongly



suggest a protected areas strategy in key caribou ranges in the north.

Other timely Alberta wolf management issues can be found further south along the eastern slopes of the foothills near where I do research on wolf and elk population dynamics. Concerns over the viability of wolves in national parks such as Banff have prompted debate about wolf harvests adjacent to parks. This occurs at the same time that the hunting and outfitting industry is concerned over prey (primarily elk) declines in these same areas.

Discussing this issue, I was privileged to take part in a panel discussion with members of the Alberta Professional Guides Association and the Alberta Trapping Association, a B.C. rancher, a Parks Canada biologist, Dr. Carolyn Callaghan of the Central Rockies Wolf Project, and a representative from the Defenders of Wildlife (Canada).

In the panel discussion, several things became clear. First, not as much is known about wolves in the foothills as in the Rockies. There may very well be sustainable wolf harvests outside the parks because habitat quality and productivity is much higher in the lower elevation foothills. However, we do not know for sure, and research is now underway by Nathan Webb and Dr. Evelyn Merrill at the University of Alberta to understand foothills wolf ecology. This research will benefit from active collaboration with the hunting and trapping community, as well as conservation groups.

Next, many panelists agreed that a critical factor was conservation and restoration of ungulate winter ranges to conserve intact predator-prey systems. **Wolf conservationists often miss the point that the best way to protect wolf populations is by conserving prey populations.** I cannot emphasize this last point enough. Thus more effective partnerships with organizations such as the Rocky Mountain Elk Foundation and Nature Conservancy to protect and enhance winter ranges should be an important priority.

Finally, I think many panelists agreed that access management affects both human and wolf predators, and steps should be continued to slow down the wave of increased access crashing down on the Eastern Slopes.

Reflecting back on these discussions and the controversies surrounding wolf control issues, I am left with one final thought. Perhaps one reason why wolf control is so controversial is the seeming self-contradictions within the conservation movement, as perceived by those groups that value big game animals more than wolves. Conservation-minded groups often argue against wolf controls because of the meager scientific justification for the effectiveness of such wolf control measures. It makes sense: if we are not sure it will work, we argue against it using this scientific uncertainty.

What seems contradictory is similar scientifically weak arguments about the keystone role of wolf predation. In such large-scale conservation projects as Y2Y or the Wildlands project, the keystone role of wolves and other predators is the foundation upon

which wolf conservation is built. Wolves have keystone impacts on the ecosystem by reducing prey numbers, which benefits willow, songbirds and biodiversity.

However, the scientific basis of this claim for wolves is presently quite weak in the scientific literature. The reason is simple: the experiment you would do to test for the "keystone" role of predation is the exact same as for wolf control. You would compare biodiversity in areas with and without (wolf control) wolves. Therein lies the potential lurking inconsistency. To a hunter, being told that there is no science to support wolf controls at the same time as we argue for the keystone role of wolves to justify wolf conservation is a great logical conservation conundrum.

What lessons may be taken from this discussion? Presentations at the Congress and this example really highlight the fact that the interpretation of the impact of wolves on prey depends quite clearly on the ethical perspectives of the person. The "keystone" role of wolf predation is becoming clearer, both through experimental wolf reductions and through research on the trophic effects of wolves.

Different groups will interpret these "facts" based on widely different ethical and value systems. To someone who values big game or derives an income from hunting, the interpretation may be to reduce wolf numbers. For the conservationist, it might be to protect all wolves. These different groups will interpret the picture of a dead elk completely differently. How will we resolve these divergent interpretations that result from different value systems?

I believe that conservationists and hunters must find common ground and then build together to conserve not just wolves, but their prey as well. The more prey, the more wolves: it's that simple. It became evident in the panel discussion that we all have much in common: protection of winter ranges, habitat enhancement projects and access management are all subjects on which we should agree.

These conclusions helped bring what might have been a widely disparate group together in a first careful discussion. What is needed is more of these discussions. In this context, I believe the World Wolf Congress successfully met its goal of starting to build a bridge between science and community.

(Mark Hebblewhite is a Ph.D. candidate at the University of Alberta, Department of Biological Sciences, where he is working on wolf and elk population dynamics on the Eastern Slopes of Banff National Park centred on the Ya Ha Tinda. Mark was one of the first two Canadians awarded the Canon-National Parks Science Scholarships for the Americas.)

The opinions in this article are solely those of the author and do not necessarily reflect those of the University of Alberta, funding partners, or even others at the panel discussion. They are just my personal insights on the matter. ❦



Bull Elk Kill



MAUREEN ENNS CAPTURING THE SPIRIT OF THE WILD IN VARIOUS MEDIA

By John Geary

If you harbour any doubts about the importance wildlife plays in the art of Maureen Enns, that doubt is quickly erased when you step into the home she and partner Charlie Russell share in the foothills west of Calgary.

Entering the front hall of their home is like entering a zoo in reverse – it almost feels like you're the one on display, while the animals – or at least, images of animals – are the ones doing the looking. Pictures of elephants, wild camels, bears and other animals stare down at you from the walls.

Maureen's travels have taken her to Australia, Africa, western Canada, and most recently, Russia's Kamchatka Peninsula. She has always found something in each locale that inspires her. In Australia, she focused on art featuring wild camels; she created many images of elephants from her time in Africa.

Maureen can trace some of her inspiration for her most recent works – images of grizzly bears – back to a meeting in Banff 10 years ago. Her interest in creating a series on Canadian Rockies grizzly bears resulted in her making the acquaintance of Charlie Russell. Since then, her life has been irrevocably intertwined with Charlie and bears. Given the pair's well-documented involvement with a family of grizzly bears in Kamchatka, it should come as no surprise that the co-author of *Grizzly Heart* has been working in an ursine theme for the past several years.

The self-taught artist combines artistic realism with a hearty sprinkling of abstraction and a dash of impressionism to create visually striking images of the wild on both paper and canvas. When creating her art, she does not restrict herself to one type of medium.

"I produced most of my work in Kamchatka on paper now, in the field," Enns says. "I adhered some of my photos in a finished piece. I'll combine anything I can throw at it – watercolour, oil paints, glue – a whole bunch of things will be in the image."

Her ursine artwork goes beyond two-dimensional paintings and photographs. Using the tracks of actual grizzlies cast in plaster, she created a series of stone tablets in relief for the Art Gallery of Calgary opening in 2000.

During the past year, Maureen used some of those casts to create new images, integrating them onto canvas with cast images

of other animals. Until this past spring, she and Charlie had planned to spend one final year with the bears in Kamchatka. After that, she planned to begin a search for the source of a new series.

However, when he returned there last May, Charlie discovered that someone had broken into their cabin: he found a bear gall bladder hanging on the wall of their cabin. Maureen joined him in June, but although they searched, they found no trace of the bears with whom they had shared their past nine summers.

"Every day I hiked for hours into all their known haunts of past

years in June," she says. "We know well what they eat this time of year and thus easily where to locate them. Everywhere we went we were flooded with memories of times with Biscuit, Chico and Rosie or Brandy and her family.

"It was excruciatingly painful to conduct the search. I started almost running to areas newly revealed by melting snow hoping to at least find evidence. But we did not find carcasses or signs of bears having been killed."

As a memorial to the family of bears, Maureen put together

her "Epitaph Series," which opened at Calgary's Masters Gallery this past September. Working on it during the summer helped her come to grips with the situation and resulted in work that has "a very raw edge to it."

She is working on another bear series called the "Madonna Series." In December, she plans to unveil another exhibition, "A Testament," which will open at a gallery in Whistler.

During an interview conducted last winter, Maureen said she thought she was getting close to doing her last bear. Unfortunately, that decision was thrust upon her in a manner she never expected, one that did not really involve much choice on her part.

Despite the tragedy, she will begin a search for a new topic for her artistic creativity, one that will somehow revolve around the subject of water and the conservation of that precious, life-giving commodity.

"I don't know where that search will go, but I'm going to have a conservation focus of some kind in my work." ❁



Biscuit snoozes with Maureen Enns.



LETTERS TO THE EDITOR

CANADIAN - U.S. NATURE CONSERVANCIES DIFFERENT

Thank you for the article by Mark Lowey in the June edition of the *Wild Lands Advocate* regarding the Whaleback ("Nature Conservancy Faces Dilemma in Whaleback"). The article was well-written and clearly explained what a very challenging situation it is for conservation in Alberta.

At the end of the article there was a reference to the recent *Washington Post* articles about "the Nature Conservancy." I am concerned that the juxtaposition of the article and the reference to the *Washington Post* articles may create some confusion. I would like to clarify for your members and readers that the *Washington Post* articles refer to the U.S.-based organization, The Nature Conservancy (TNC), while the Whaleback story is about the Nature Conservancy of Canada (NCC).

While our names are similar and we have a good relationship with TNC, as we do with many other conservation organizations, we are completely separate organizations. I would appreciate it if you could inform your readers of this distinction.

Thank you for your attention to this and your important work on behalf of our Alberta environment.

Sincerely,
Jim Campbell
Director of Development and Communications
Alberta Region – Nature Conservancy of Canada

ASSOCIATION NEWS

THE BIGHORN WILDLAND IN PRINT

Nestled along the central east slopes is 4,000 km² of spectacular wilderness. Find out more about one of the last great pristine wilderness areas in Alberta, the Bighorn Wildland, in this latest book from AWA.

- Filled with spectacular photographs, excellent maps, personal reflections and natural history of the majesty of this beautiful area.
- An excellent introduction for those seeking a wilderness experience.

- Written by highly-regarded experts with first-hand knowledge of the area; their personal experiences in the Bighorn make this book easy to read.
- A valuable reference for years to come.

To obtain copies of the book, please contact Nigel Douglas, (403) 283-2025; awa@shaw.ca. Paperback, full colour, \$29.95 (\$7 shipping and handling).



© Maureen Enns - Biscuit: A Careful Look

MY VOLUNTEER EXPERIENCE IN THE BIGHORN

By Darren Bezushko, AWA Volunteer

In July of this year, Nigel Douglas, AWA's outreach coordinator, called to ask if I would be interested in participating in six days of fieldwork for AWA's Bighorn Monitoring Project. This was something I was keen to do, my only dilemma being my lack of backpacking gear for the trip. Through the resourceful staff at AWA, enough gear was assembled and I was soon ready to go.

The trip started out with myself, Lara Smandych and Laurie Wein, both conservation biologists with AWA. We arrived at our destination, the Hummingbird equestrian staging area, and set up camp. Once this was done, we went straight to work collecting field data. I must admit that I was a little apprehensive as to what my role would be on the trip. However, Lara and Laurie had me participating in no time. They taught me to use a GPS and explained the importance of various field equipment they use to monitor the impact of recreational activity in the region. I was soon measuring depths and cross-sectional areas of ruts as well as widths of trails and slopes, learning a lot about the importance of protecting this uniquely beautiful area.

The second day of the trip, Laurie's husband Dave and their dog Tipper joined us. We couldn't have asked for better weather; however, the smoke haze from smouldering forest fires partially obstructed our views of the beautiful scenery. After travelling a fair distance it became very clear to me that there is a definite need to monitor human activity in this area, particularly off-highway vehicles (OHVs). Although, we did not have any encounters with illegal OHV use, the signs were there.

The wildlife viewing was fairly limited on this trip. However, we did see some wolf tracks in a mud flat, as well as a cow elk and her calf on the trail. That's Mother Nature for you: one can never predict what one will see.

I have to admit that the trip was a lot of fun and Lara, Laurie and Dave were great company. They made sure I was well fed and having a good time. It was wonderful to see the dedication and professionalism that Lara and Laurie demonstrated towards their work. The monitoring of this area is critical to its long-term protection. If you want to have a fun, rewarding and great learning experience, I would highly recommend participating in AWA's Bighorn Recreational Monitoring Project. 🌿



Darren Bezushko by the campfire.



February 26-29, 2004
Calgary, Alberta

Keeping the Wild in the West

Sign up for the official conference list and newsletter at www.PCESC.ca

PCESC Conference Organizing Committee
Box 6398, Station D Calgary, AB T2P 2E1
email: info@pcesc.ca

Correction: Photo on the front page of the August 2003 issue should have been credited to P. Taylor.



OPEN HOUSE TALKS PROGRAM

CALGARY

Location: The Hillhurst Room,
AWA, 455 – 12 St. NW
Time: 7:00 – 9:00 p.m.
Cost: \$5.00 per person
Contact: (403) 283 2025 for reservations
Pre-registration is advised for all talks.

Tuesday, October 7

The Bighorn Wildland

A presentation of the spectacular new
Bighorn Wildland book
With *Vivian Pharis*

Tuesday, October 21

Fish, Gold and Rare Plants: What Do They Have in Common?

With *Reg Ernst*

Tuesday, November 4

Bears, Trains and Automobiles: The Future of Alberta's Grizzlies

With *Tracey Henderson*, Grizzly Bear Alliance

Tuesday, November 18

Let the Trumpets Sound!

Trumpeter Swans: Their Future in Alberta

With *Marian White*

Friday, November 21

Creating Habitat for Grizzlies by Learning to Live with Them

With *Charlie Russell*

Tickets: \$25

Tuesday, December 2

Lynxes in Alberta

With *Clayton Apps*

Tuesday, December 16

Curing the Silence: Restoring Trills, Trumpets, Tracks to Alberta's Wilderness

With *Tian Dalgleish*

** To be confirmed**

Tuesday, January 13

Bats in Alberta

With *Robert Barclay*

OTHER EVENTS

Wednesday, November 5, 6:00 pm

Bighorn Wildland Book Tour with Vivian Pharis

Buddy's Bookshoppe,
4928 – 50th Street, Rocky Mountain House

Wednesday, November 12, 7:00 – 9:00 pm

Cost: \$5.00

Dinosaur Provincial Park

Fish Creek Environmental Learning Centre (west end of
Fish Creek Provincial Park, off of Anderson Road and
37 St SW). To book your seat in advance,
phone 297-7927.

For more information on public education programs and
school programs offered in Fish Creek Provincial Park,
visit our Web site at www.cd.gov.ab.ca/parks/fishcreek.

November 23-26 – Banff Centre

Banff Mountain Summit 2003: Mountains as Water Towers Conference

See www.banffmountainfestivals.ca/festivals/summit.



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Editorial Disclaimer: The opinions expressed by the various authors in this publication are not necessarily those of the editors or the AWA. The editors reserve the right to edit,



SUPPORT ALBERTA WILDERNESS

"Our quality of life, our health, and a healthy economy are totally dependent on Earth's biological diversity. We cannot replicate natural ecosystems. Protected areas are internationally recognized as the most efficient way to maintain biological diversity"

- Richard Thomas

Alberta Wilderness Association (AWA) is dedicated to protecting wildlands, wildlife and wild waters throughout Alberta. Your valued contribution will assist with all areas of AWA's work. We offer the following categories for your donation. The Provincial Office of AWA hosts wall plaques recognizing donors in the "Associate" or greater category. Please give generously to the conservation work of AWA.

Alberta Wilderness and Wildlife Trust - an endowment fund established with The Calgary Foundation to support the long-term sustainability of the Alberta Wilderness Association. For further details, please contact our Calgary office (403) 283-2025.

Membership - Lifetime AWA Membership ☐ \$25 Single ☐ \$30 Family

Alberta Wilderness Association

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Alberta Wilderness and Wildlife Trust Annual Lecture and Awards 2003

CREATING HABITAT FOR GRIZZLIES BY LEARNING TO LIVE WITH THEM

with Charlie Russell

Date:

Friday, November 21, 2003

Location:

The Hillhurst Room, AWA Office,
455-12 St. NW, Calgary

Time:

Reception at 6:00 pm,
Awards and Lecture at 7:00 pm

Cost:

\$25.00

For Reservations:

(403) 283-2025 or awa@shaw.ca

Seating is limited.



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