

WILD NEIGHBOURS

Alberta's spectacular Bow Valley and environs offer valuable lessons in how humans and wildlife can co-exist. Will we learn them before it is too late?

By Fraser Los Photos by John E. Marriott

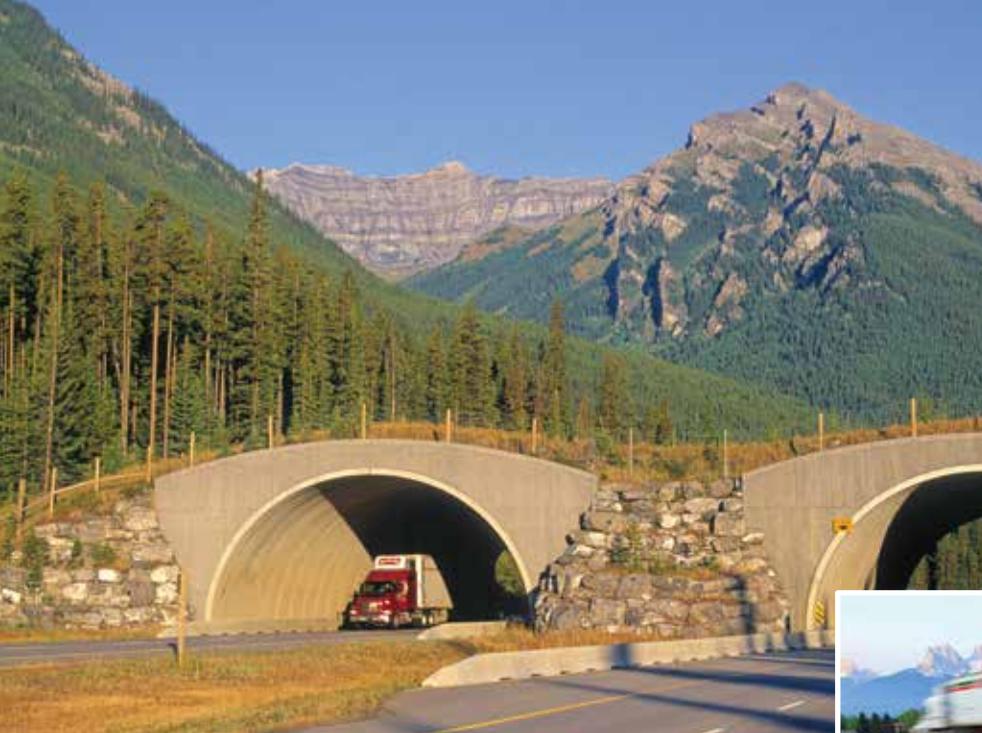
STOP MY CAR ON A WINDSWEEP SHOULDER OF THE busy four-lane Trans-Canada Highway a few kilometres west of where Alberta's Bow and Kananaskis rivers converge. I'm not far from Highway 40 to Kananaskis Country, and the exit to Highway 1A, the Bow Valley Trail. As a parade of cars and transport trucks speed by, I feel the ground shudder and shake. I park far off by the ditch and climb a sun-drenched hill. Looking east, there are rolling foothills that stretch to Calgary an hour away; to the west, near and into the distance, there's a seemingly impenetrable wall of mountains, carpeted green with spruce and pine, interrupted by jagged cliffs where trees cannot grow.

Everything gets pinched through narrow gaps between these towering peaks — the converging highways, the towns and villages they connect, and the busy cross-country railway that transports goods to and from far-flung communities and ports on the coast. Wildlife habitat is

wedged in here as well, strung along the gentler slopes, as animals try to follow their ancient pathways along the rivers.

The animals here, as everywhere, are constantly on the move, searching for food and mates and places to rear their young. That's why the Alberta government is considering a wildlife overpass right where I'm standing — an area dubbed Bow Valley Gap by local conservationists — roughly 20 kilometres outside the Banff National Park gates. Proponents say the overpass would reduce the number of wildlife-vehicle collisions here and would give roaming elk, wolves, grizzly bears and other animals safe passage across a highway that averages roughly 22,000 vehicles a day.

About 20,000 people live in the Bow Valley, mostly in the Banff townsite and nearby Canmore, and roughly four million tourists, nature lovers, hikers, skiers and back-country adventure seekers visit every year. "We've got two of the biggest protected areas in Alberta — Banff and



Kananaskis — and a city of more than a million people an hour away,” says Jay Honeyman, a human-wildlife conflict biologist for Alberta Environment and Parks. “It’s a very, very busy place — some say it’s pie-in-the-sky to think that wildlife would want to live here, but so far, they have.”

There’s more than a century behind efforts to conserve wildlife in these ecosystems — including in neighbouring national parks Kootenay, Yoho and Jasper — and it’s been honed by extensive scientific research focused on that mandate. In some ways, the Bow Valley is like a long-term experiment at the ecosystem scale that will prove whether or not we can keep wildlife healthy and thriving amid all this human activity.

“As animals adapt, we adapt too and try to find that balance,” says Honeyman, whose job is to proactively prevent dangerous wildlife encounters throughout the region. “In the Bow Valley, we’ve shown that these things are achievable.” But he’s quick to add the challenges are not going away — if anything, they’re more acute than ever.

Successful co-existence with wildlife, he says, requires a range of planning efforts — from highway fencing and wildlife crossing structures, to bear-proof garbage bins and education programs that help raise awareness and minimize negative interactions between wildlife and people.

There’s a long history of such initiatives in the Bow Valley, which is why it’s considered a world leader in wildlife management. Within Banff’s park boundaries along the Trans-Canada Highway, there are more than 80 kilometres of fencing, 38 underpasses and six large overpasses similar to the one proposed at Bow Valley Gap. By including these fences and crossings as part of its project to twin the highway, which began in 1996, Parks Canada steered clear of impacts that would have been disastrous for wildlife. Based on an ongoing program to monitor their effectiveness, the structures have been

STILL MORE TO BE DONE

Within Banff’s park boundaries there are 80 kilometres of fencing, 38 underpasses and six large overpasses. Studies show they reduce wildlife collisions by 80 per cent

shown to reduce wildlife collisions by at least 80 per cent, which is why they’re now being replicated worldwide.

With similar foresight, municipal planners in Banff and Canmore vowed to clean up their garbage systems, which for years had attracted scavenging wildlife. “Bears used to rummage around in town dumps all the time,” says Stephen Herrero, former professor of animal behaviour and ecology, and author of *Bear Attacks: Their Causes and Avoidance*. That situation resulted in a series of horrific attacks, one fatal, near Banff in 1980. “Everybody pretty much agreed that garbage and grizzly bears or garbage and black bears was a dangerous mix,” says Herrero, whose research observing bears led to the innovative bear-proof garbage bin design used in the Bow Valley today. Both towns have done away with curbside pickup as well, ensuring no overnight garbage attractants.

The garbage systems, just like the crossing structures, are true success stories in wildlife management, having virtually erased what was once an endemic problem. “A lot of other areas inside national parks have the same quality of garbage systems, but those places are dedicated to wildlife conservation,” says Herrero. “Canmore is probably the best for a non-protected area anywhere in North America.”

The success is obvious. It’s clear that animals still thrive here. Dense forest surrounds local neighbourhoods, carnivores stalk their prey on the outskirts of town, and herds of elk often congregate on grassy school grounds. But although wildlife in and around town may seem unique and positive, it can also be dangerous — especially when big mammals like grizzly bears and elk are involved.

In many cases, though, it’s human behaviour that is unpredictable and hard to control — both within and outside town limits, and even in protected areas reserved strictly for wildlife. As local populations grow and visits increase, “people are everywhere, even on little game trails, and they’re now biking and jogging at night as well,” says Melanie Percy, a senior ecologist with Alberta Parks, Kananaskis region. “Wildlife often use these areas at night to avoid humans, but now there’s suddenly people there.”

Percy was on the steering committee for a two-year human use management review process in Canmore. They used dozens of remote cameras to track what was actually going on in those wildlife corridors and habitat patches. What the cameras showed, she says, was rampant human use throughout, often involving off-leash dogs in areas reserved for wildlife. The two-year review concluded in 2015 with a series of recommendations for addressing the issues, including more visitor information and education, better trail signage and increased enforcement of dog rules and other regulations.

The problem, says Percy, is that if people don’t comply with these regulations and restrictions, wildlife will continue to be pushed out and negative encounters will become more frequent. “We need to get through to the recreationists and others who are using the land,” she says. “We need to do it before we lose the opportunities for co-existence we have left.”

Those kinds of challenges are difficult to navigate in Canmore. Although surrounded by park land, it’s not actually within park boundaries, unlike Banff, which means there’s no mandate or requirement to look out for the interests of wildlife. Everything that’s been done so far, or will be done in the future, is due to the good intentions and hard work of local citizens and officials who recognize how valuable it is to live with wildlife.

“There’s a lot of collaborative effort that goes into making this work,” says Jay Honeyman. “But we’re at the point now where we need to do more.” One of the biggest challenges, he says, is the constant change in Canmore, which has seen enormous growth over the last 30 years. “Animals are going places they used to go and finding a condominium complex or a schoolyard,” he says. “They’re just constantly having to adapt.” And adapting can be difficult when wildlife is managed in different ways depending on the jurisdiction — there may be one set of rules in a park, but a completely different set of rules in a neighbouring municipality.

“IN CANMORE, DENSE FOREST SURROUNDS NEIGHBOURHOODS, CARNIVORES STALK PREY, AND ELK CONGREGATE ON SCHOOL GROUNDS. IT IS UNIQUE... AND POTENTIALLY DANGEROUS”





GRIZZLY ENCOUNTERS

Bear 148 is seen here at centre with sibling and her mother, Bear 64. About five years after this photo, following repeated dangerous encounters with humans, 148 was moved to Kakwa Wildland Park. She soon left the protected area...

“That’s very confusing to a carnivore,” says Honeyman. Our goal should be to manage by the whole landscape, he argues, because that’s how animals move. A grizzly bear, for example, will cover enough ground to encounter many communities and different scales of tolerance. “In one area, people take pictures and want to observe,” he says, while other areas are hunting zones. “That’s what grizzly bears deal with. It’s completely unpredictable.”

In July 2017, that contradiction played out in the national media, when a female grizzly bear in the Bow Valley, known as Bear 148, bluff-charged a few joggers and hikers in a popular recreation area on the south side of Canmore, where she and other bears were feasting on buffalo berries. The six-year-old collared bear was trapped and relocated to a remote area in northwest Alberta, Kakwa Wildland Park. By the end of September, she had roamed into B.C., and was shot (legally) by a hunter.

The events were a watershed for local conservationists, wildlife managers and municipal planners, many of whom viewed it as a possible sign of things to come — unless new steps were taken to minimize factors leading to negative wildlife interactions. By November, local officials from Banff and Canmore had convened a group of stakeholders, including First Nations, wildlife biologists and representatives from Parks Canada and the Alberta Government, to be part of the

Bow Valley Human/Wildlife Coexistence Roundtable — their collective vision to create a more integrated approach to wildlife management in the Bow Valley.

The group faces formidable challenges as they wrestle with impacts from accelerating development, such as the expansion of Canmore’s Three Sisters Mountain Village resort, which could add thousands of new residents in the southeast end of town. Many biologists and conservationists in the area argue it’s simply too much, too fast. Their main concern is focused on one of the central tenets of conservation biology: the importance of wildlife corridors and connectivity.

Animals need quality habitat to survive, but they also need to move between habitat patches and interact with other populations. Grizzly bears are perhaps the clearest example of this need for long-range movement. Parks just aren’t big enough for them, since individuals cover vast territories — grizzly bear populations would not last if confined within small, isolated landscapes, since the decreased genetic diversity would leave them susceptible to disease and other environmental factors. That’s essentially why grizzly bears have been extirpated from much of their historical range throughout inland North America (except within intact habitat and protected areas along the Rocky Mountains and further north). It’s also why Alberta’s draft

recovery plan identified connectivity as a major component in conserving the threatened species in the province.

In a valley constrained by steep mountains and busy roadways, maintaining wildlife movement corridors can be a constant battle. “You need connections to actually function,” says wildlife biologist Karsten Heuer, who has worked on issues related to connectivity in the Bow Valley for more than two decades. “A grizzly bear needs to have movement routes to get to that berry patch in the fall, to that denning site in the mountains in winter, and to important feeding areas in spring when the snow first melts. That’s really what we’re trying to accommodate here.”

Heuer and other researchers have made great strides in determining what makes an effective wildlife corridor — how wide, how far from town, how steep, even the type of vegetation. He says when they began mapping actual wildlife movements, using radio telemetry monitoring and footprints in the snow, it was a huge eye-opener. “The maps spoke for themselves and the animals told the story,” explains Heuer. “They showed ... cul-de-sacs or dead-ends, places where there was still a thoroughfare, and places where animals were stressed because they were squeezed into one place.”

Although wildlife corridors have been considered as part of development proposals like the Three Sisters project, biologists contend the land set aside is not wide enough and too far up the slopes where animals rarely travel anyway. Besides, the experts say, there’s too much development too fast, and often not enough time to make evidence-based decisions. “There’s good reason to use the precautionary principle and to take it slow,” says Adam Ford, the Canada research chair in wildlife restoration ecology, who focuses on human-wildlife conflict and coexistence, particularly in the Bow Valley. “Great science is being done in the Bow Valley, but is that science being used in decision making?”

In April 2017, Ford and fellow ecologist Mark Hebblewhite, from the University of Montana, penned a letter to Alberta’s Minister of Environment and Parks urging the creation of a formal mechanism that would ensure the best available science is used for planning in the valley. Development is “proceeding faster than the speed at which science can provide answers,” and that scenario, they wrote, puts wildlife at risk. The letter urged officials to postpone further development approvals until the cumulative effects could be assessed.

That same call for restraint has been echoed by representatives from the Stoney Nakoda First Nation, whose traditional territory extends along the eastern edge of the Rocky Mountains and the foothills leading to Calgary. “We’ve been good at setting land aside for designated purposes, but not so good at setting land aside just for wildlife,” says William Snow, who manages consultation for the Stoney Tribal Administration and evaluates development proposals throughout Stoney Nakoda territory. One way to change that, he argues, is to bring more traditional ecological knowledge to the planning table.

BE SMART IN THE WILD

Key tips for respecting wildlife and protecting yourself

Bow Valley WildSmart is “a proactive conservation program” dedicated to reducing negative human-wildlife interactions in the area. Founded in Canmore in 2005 by local businesses, environmental groups and three levels of government, the organization has developed a coordinated campaign of education and outreach that increases public safety and enjoyment in nature while supporting and sustaining wildlife populations.

While the materials they produce are specific to the challenges faced in the Bow Valley, what they advocate can be very useful anywhere in Canada that humans and wildlife intersect. Here are some of their recommendations.

- **Remember**, being close to humans is very stressful for wildlife. Keep a safe distance, perhaps staying in your vehicle if you are road-side. If a crowd of onlookers is gathering, leave.
- **If** biking, remember that you are more likely to surprise wildlife, in bush, on blind corners and hill crests and beside noisy rivers. Slow down; make noise.
- **Always** be aware of your surroundings and recognize scat and tracks. Leave the area if you come across a dead animal. Stay on trails and respect all local warnings and closures.
- **If** you encounter wildlife, stay calm. Stop, do not run away. If the animal hasn’t noticed you, back away quietly and slowly. If you are perceived, back away slowly, speaking in calm voice. Be prepared to use your bear spray.
- **Never** approach a female with her young, particularly early in the season. During rutting season, be extra cautious about proximity.
- **If** going into bear zones, take bear spray. It is your best defence, and can be useful as a last resort with aggressive moose, elk, wolves, coyotes and cougars.
- **Whether** you’re in a town with nearby wild animals or at a remote campground, do not feed wildlife; it habituates them to human food and makes them more vulnerable to harm. While you are at it, keep your garbage secure, empty your BBQ grease tray and keep pet food inside.
- **When** hiking in the wild, keep your dog on a leash — it’s better for all concerned.

For more, visit the **Canadian Wildlife Federation website at cwf-fcf.org**. Try searching “hike” or “sustainable development” for some useful info.





In a 2016 study on grizzly bears, the Stoney Tribal Administration provided a blueprint for how that could happen. Focusing specifically on Galatea Creek in the Kananaskis Valley — a traditional Stoney hunting and gathering location and also known as prime grizzly bear habitat — the study first gleaned local knowledge and perspectives from Stoney Elders about the region, based on personal experience and stories passed down over generations. With that as context, the next phase involved field observations, or “cultural monitoring,” throughout the busy recreational area, which were incorporated into a final report.

Snow says the study aimed to increase understanding of how human activities affect grizzly bears in the region and to identify opportunities for improving conservation and management. “We wanted to change management practices, and we wrote the report with that in mind,” he says. “If we just keep doing the same things we’ve always been doing, then grizzly bears are going to keep being frustrated by people coming into their areas during their time of the year.”

The report concluded with six recommendations, including a call for keeping people away from Galatea Creek for a period in early August every year — a very important time for grizzly bears, because of berry season. “There’s a reason grizzly bears keep coming back to Galatea Creek year after year, and they’re going to keep coming back — that’s our cultural understanding,” says Snow. “Closing off that area for two weeks a year is not too much to ask. We should be able to share this landscape with wildlife.”

Snow hopes to do similar studies for species and ecosystems in the Bow Valley and elsewhere, including a cultural study related to the recent historic bison reintroduction in Banff National Park — an initiative the Stoney Nakoda supported along with other Indigenous communities across western North America. “We’re not saying we want to take away from the science — we just want to add a traditional knowledge component,” says Snow, arguing that

local knowledge is often a missing piece in planning. “Right in our own backyard, we’re not employing perhaps the most critical part,” he says, referring to many generations of accumulated knowledge of the ecosystem and its wildlife.

The Stoney report also called for increased wildlife connectivity and crossing structures throughout Kananaskis and the Bow Valley — as far as possible from other developments, such as industrial activities, campgrounds and trails. That recommendation, says Snow, was based on the recognition, shared by biologists, that wildlife management will only be successful by taking the whole ecosystem into account.

Standing on the elevated hill at Bow Valley Gap, at the site of the proposed overpass over the Trans-Canada Highway, you get a clear view of the importance of wildlife connectivity. Not only would an overpass here reduce wildlife-vehicle collisions, it would also enable movement of grizzly bears and other wildlife making their way between Kananaskis and Banff National Park and beyond. “The Bow Valley is one of four or five key linkage zones for wildlife along the mountains that stretch from about Yellowstone National Park all the way to the Yukon,” says Stephen Legault, Alberta director for Canmore-based Yellowstone to Yukon Conservation Initiative, a trans-boundary organization. “An investment in wildlife connectivity here has payoff not just for the Bow Valley and Alberta, but for that entire chain of mountains.”

Legault says the overpass would be an essential part of a long-term plan to keep grizzly bears and other iconic wildlife thriving in the Bow Valley. “We have to look at this in an integrated way,” he says, “You can’t separate connectivity from development pressures and all other factors. That certainly makes things more complex, but this world is complex and requires complex solutions.”

For wildlife managers like Jay Honeyman, that’s the next big challenge — to work collaboratively across multiple jurisdictions and departments to manage at the full ecosystem scale. And that necessarily means management decisions that look 50 or 100 years down the road.

“We’ve been very successful at living with wildlife so far,” says Honeyman, and that’s why the Bow Valley has lessons to share with communities around the world. “It’s been described by some bear biologists as one of the busiest landscapes where grizzly bears continue to exist.” But it’s also true that significant development in the valley seems inevitable for years to come, he adds. How this complex coexistence is handled will dictate whether the extraordinary wildlife that still thrives here will remain into the future.

“That’s what we’re trying to do with this roundtable,” he says. “We’re drilling down a little deeper to find out where we go from here. The story’s not over; there’s still lots for us to do.” 🐾

Canmore writer Fraser Los has been nominated for three National Magazine Awards for his feature articles on nature and on wildlife conservation