

Where the Buffalo Roam

Fire helps welcome back the Rockies' big fauna.

By Clifford A. White

Banff, established as Canada's first national park in 1885, is once again providing a home for one of its nearly lost denizens—the iconic American bison, commonly called the buffalo. North America's largest historic land mammal was once an important component of the area's Rocky Mountain ecosystem, grazing its valley-bottom meadows, providing prey for its keystone predators (people, wolves, and grizzly bears), and

inviting a vigorous history of human burning to maintain its habitat. But by 1860, the last wild bison in what would become the park—members of the subspecies known as the plains bison (*Bison bison bison*, as distinct from the wood bison, *B. b. athabasca*)—had disappeared as intensive hunting by both early European settlers and First Nations peoples began to shrink the large herds on the nearby plains. Banff kept a remnant herd of bison in a paddock for many decades as a tourist attraction, but keeping those display animals was deemed inappropriate for Canada's premier national wildland, and they were removed in the 1990s.

So how could Banff National Park in Alberta, Canada, a busy tourist attraction bisected by both the four-lane Trans-Canada Highway and the Canadian Pacific Railway, manage a return of wild bison after more than a century? The answer lies in a holistic ecological restoration program. Three decades ago, Banff seemed a trashed park. The busy highway, then nicknamed the “Meat-maker,” was decimating the park's wildlife, killing predators and prey alike. The bustling town of Banff blocked movements of wary carnivores through the valley, providing elk with a refuge from black bears, grizzly bears, cougars, and wolves. The burgeoning elk herd browsed grasses, forbs, and shrubs down to the ground. A century of suppressing wildland fires to protect tourism facilities had led to the disappearance of meadows that grizzly bears could forage and ungulate ranges that were overgrown with dense forest.

Today, the park is a different world. Fences keep wildlife off the highway, while a system of state-of-the-art engineered structures allow wolves, grizzlies, elk, and deer to safely move across the busy road. Canada's parliament has passed new wilderness legislation to contain the expansion of park facilities, and large carnivores travel through a protected network of wildlife movement corridors now ringing the town of Banff. Even more important, in the late 1990s Parks Canada staff began to work with the Stoney Nakoda, Siksika, Ktunaxa, and other First Nations to understand traditional means of managing the landscape through hunting and strategic use of fire to modify vegetation. Accordingly, Parks Canada instituted programs of prescribed burns and invited First Nations elders to accompany staff on operations culling the superabundant elk. These participants helped advise which animals to remove, did the butchering, and took the meat back to their communities. With these measures, native shrub-fields and meadows began to thrive.

With lower numbers of elk, park managers and visitors alike began to think longingly about restoring the large, shaggy ghosts of the past—the plains bison.

In 2010, the park's revised management plan provided firm direction to reintroduce bison. Fences would keep them off the highway. More than two decades of routine prescribed burning now could provide them with abundant habitat, and their numbers could be kept in check by wolves, grizzly bears, and First Nations hunters. Preliminary map-

ping showed that more than a thousand square miles within the park could be available for bison to roam through a network of core population, containment, and control areas. On January 28, 2012, Canada's then-Minister of the Environment, Peter Kent, announced that Parks Canada staff would begin consultation to fine-tune the plan with Banff's stakeholders and visitors. The public response was highly favorable, and the restoration project proceeded.

Slung by long lines under a giant helicopter, the first hooves of a wild buffalo herd in over a century touched the ground in February 2017, as sixteen plains bison were air-lifted from their steel transportation containers. The newly reintroduced bison herd was held for over a year in a large “soft-release” pasture. Here they adjusted

Absent for a century and a half, bison take to the mountainous territory of Banff National Park.

to the Rocky Mountain climate and vegetation conditions. Wolves and grizzlies passed through the pasture, testing bison cows' defensive instincts as they raised their first generations of calves in the wilderness.

Meanwhile, in the surrounding valleys, Parks Canada's staff burned several large areas near the holding pasture to provide a fresh crop of grass and herbs for the planned “get-out-of-jail” date. The big day came on July 29, 2018. The herd, now numbering thirty-one, walked through an open gate into their restored homeland. Within a day, they sought out freshly burned slopes and, acting more like bighorn sheep, ascended hundreds of feet nearly to treeline while grazing on succulent new forage. The bison wintered well—foraging in old and new burns, and taking shelter in nearby dense forests. By summer solstice of 2019, the herd was roaming across 300 square miles of Banff's backcountry, reopening old trails and rolling in wallows that had lain dormant for over a century.

Bringing back the bison has also been part of a reconciliation between Canada's recent human cultures and its long-term First Nations. In parallel to what has happened elsewhere in the world when national parklands have been created, the indigenous inhabitants of Banff were removed from their homeland at the time the park was established. Modern society went on to forget both their historic presence and, equally important, their knowledge of the human ecological role.

While prescribed burning provides habitat for the bison, bighorn sheep, grizzly bears, and many other iconic species, it also provides a common ground for those with recent and long-term experience in Banff to share values and knowledge. First Nations groups have hunted, gathered, burned, and created cultures in the Canadian Rockies ecosystem for several millennia. To think that modern scientists and park managers could have fully mastered techniques such as prescribed burning or managing bison in a few short decades seems ridiculous against this legacy of ancient understanding.

Humans were historically bison's dominant predator, and their hunting and burning patterns strongly influenced the typically low numbers and relatively complex movement patterns of bison in the mountains. In public parklands, where hunting is often banned, a cooperative approach between park managers and First Nations is thus essential. With continued effort and good will, Banff may serve as a model for other parks and protected areas where bison restoration is considered important for ecological integrity.

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