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Winter 2011

Crown of the Continent Magazine - Winter 2011

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CROWN^{OF}THE CONTINENT MAGAZINE

Winter 2011
No. 4

The University of Montana Crown of the Continent Initiative

The University of Montana

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CROWN OF THE CONTINENT
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Parke Peak 9,038' rises
in the northern Livingston
Range of Glacier National
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from the valley of the
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Susie Graetz photo

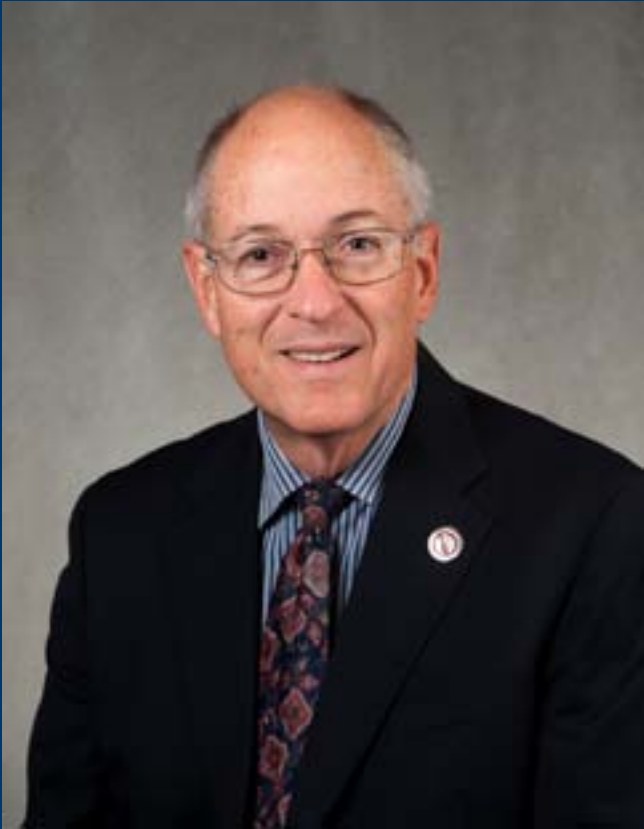
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PROVOST'S MESSAGE



The North American Rocky Mountains are a signature landscape known by people around the world. For many people the Rocky Mountain region is the most striking and remembered landscape of North America. With its high and rugged mountains, its broad plains, its rivers and lakes, and its varied peoples and traditions, it is special among the many images of North America. Within this special landscape is the relatively intact and expansive natural environment known as the Crown of the Continent. The Crown is headwaters to major continental rivers that flow north, east, and west, but it is so much more. It is the home to First Americans with long and rich traditions, to European pioneers who established farms and business, and to great ideas such as the world's first international peace park. On an even larger scale, when we combine another natural landscape, the Greater Yellowstone Ecosystem, with the Crown, we find that from Wyoming and Montana to Alberta and British Columbia we have one of the most scenically and culturally rich landscapes in the world.

For many years students and faculty members from the region's universities, and from universities worldwide, have explored the Crown of the Continent and Yellowstone ecosystems and cultures. At the University of Montana we find anthropologists to wildlife biologists learning about these special places and their inhabitants. We find them engaged in education, research, and outreach activities designed to enrich our knowledge, to educate the next generations of citizens, and to work with people of the place as they enrich their lives. What a pleasure it is to get to know the place.

As you look through and read this wonderful publication, I hope that you will learn something new, re-live experiences you have had with this landscape and its peoples, gain a renewed appreciation for what makes it special and vibrant, and desire to contribute in some small or large way to its future. At the University of Montana we are dedicated to learning from it and to doing what we can to ensure that it endures as a special place for us all. We recognize the Crown of the Continent, and the larger environment from the Greater Yellowstone Ecosystem to the Crown, for its iconic qualities and as an opportunity for science and education that is unmatched and as a place that symbolizes the potential of the land and of its people.

Perry Brown
Provost and Vice President for Academic Affairs

DIRECTORS'

Greetings once again and welcome to Issue #4 of the University of Montana's Crown of the Continent E-Magazine. We are very pleased to be able to offer it to you and hope that you both enjoy it and find it informative and stimulating. And thanks to our contributors to this issue for providing us and our readers with tremendous photographs and fascinating and important articles.

As we have mentioned before, this Initiative is a collaborative effort involving numerous individuals, institutions, organizations, and agencies, all of whom have a keen interest in this spectacular and significant place we call the "Crown of the Continent."

In this issue we especially want to draw your attention to the awe-inspiring photos of Chuck Haney, the pieces from our partners in Calgary at the Miistakis Institute who are engaged in very important work in the northern part of the Crown, as well as the personal essay by Ric Hauer of UM's Flathead Lake Biological Station that also becomes a discussion of recent developments to protect the Flathead's North Fork. We have chosen to feature in this issue one portion of the Crown that we all know informally as "The Bob" with three segments. We hope that you find the photos, the biographical information about Bob Marshall the man and conservationist, and the article about the creation of this anchor wilderness area in the Crown both inspiring and interesting. Finally, we are introducing a feature in this issue that we intend to continue on a regular basis, that is, feature articles on "Towns of the Crown." In this issue, as an offshoot of our regular "Book Recommendation" piece, we are focusing on fascinating Fernie, British Columbia.

We also want to thank Provost Perry Brown for his introductory column to the issue. Perry, the long-time Dean of UM's College of Forestry and Conservation and now UM's Provost and Academic Vice-President, has been instrumental and very supportive of our Crown Initiative.

MESSAGE

Finally, thanks again to all of our readers who have passed along comments to us about the Initiative, the E-Magazine, and the Crown Website. We're pleased that virtually all of them have been enthusiastically supportive, and some of them have given us great suggestions. We hope to hear from more of you! Please let us know what you think about all of this, and pass along this issue to friends, family members, or anyone else you know who might be interested in it (it's easy electronically—just forward the message that let you know about this newest issue). Best wishes for the end of winter (it's been a wild one throughout the region!), the start of spring (it will come, really), and all the exciting outdoor activities that the new season brings with it.

Jerry Fetz and Rick Graetz, Co-Directors

AS WE CONTINUE THIS WORK, WE DO ASK FOR YOUR HELP.

We bring this E-Magazine and other publications to you free of charge. Yet, we certainly won't reject any donations as large or small as you might consider sending our way to support this important initiative.

\$5, \$10, \$25 or whatever amount you find you can afford will be put to good use as we seek to expand our collaborative efforts.

You may send donations to University of Montana Foundation Brantley Hall, Missoula, MT 59812, USA, with a notion of "Crown of the Continent Initiative" on your checks.

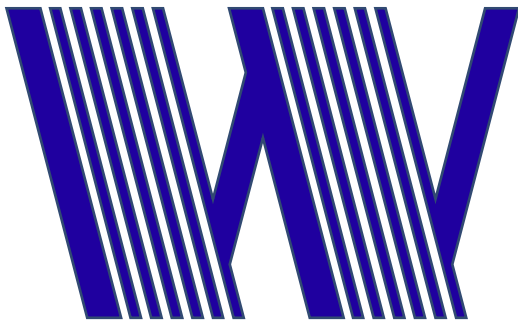


IBM

THIS IS BOB MARSHALL COUNTRY

BY RICK G





With the temperature hovering at 30 degrees below zero and the wind-driven snow piled high, my climbing

partner and I were heading toward the North Fork of the Teton Canyon for some backcountry skiing and a winter assault of Mt. Wright. It was the Christmas season and the saloon in Choteau, full of warmth and holiday revelers, was a most attractive preliminary stop. The cheer of the folks dancing western music made it difficult to leave. Still, we were excited to meet winter head on in the epitome of wilderness, in a region that has given me some of my greatest wildland adventures: the Bob Marshall country.

West of Augusta, Choteau, Bynum and Dupuyer, the towering walls of the Rocky Mountain Front abruptly terminate the sprawling, open Montana prairie. For 110 miles, this craggy limestone formation serves as the eastern rampart of the Bob Marshall country. Mountain ranges of this extensive territory have a distinct northwest-southwest axis and are separated by long river valleys, some carved by glaciers. From Ear Mountain, a prominent Front Range peak, it is 60 miles as the eagle flies to the slopes of the equally impressive Swan Range, the Bob's western rank.

Glacier National Park and Marias Pass form the northern border, and the valley of the Blackfoot River is the southern terminus of the Bob Marshall eco-system. Its longest axis, from West Glacier south to Rogers Pass, is 140 miles and it may be circled by highway, a 380-mile journey, but not a single road crosses it. This is a land of incredible diversity, a scaled down version of what the western American wilderness once was.

Windswept prairie ridges, deep canyons, towering cliffs, dense forests, wild rivers, lush meadows and a diverse wildlife population - all are part of this, the crown jewel of the nation's wilderness system.

With the Continental Divide as its backbone, the Bob Marshall country is considerable in size, grandeur and legend. Comprised of the contiguous 1.5 million acre Bob Marshall, Great Bear and Scapegoat wilderness areas and almost one million acres of surrounding wildlands, the Bob is home to almost every big game species found in North America, including the grizzly bear. Bald and golden eagles soar from its precipitous canyon walls and timber wolves still roam here.

Two of Montana's blue ribbon fishing and floating

streams, the South Fork and Middle Fork of the Flathead River, are born from its interior high country. The South Fork gets its start on the southern boundary of the wilderness as the Danaher River, and the Middle Fork commences as a trickle via Strawberry Creek at Badger Pass on the Continental Divide.

Other major streams and rivers are born in the Divide country. They are the Sun River, draining the area on the east side of the Continental Divide, the South Fork of the Two Medicine River, flowing north toward Glacier National Park, Birch Creek, flowing east from the Divide to the prairie, Badger Creek, rising from peaks of the Front Range and surging eastward and the Dearborn River, making its headwaters along the east wall of Scapegoat Mountain and rushing southeast to the Missouri River.

This realm is steeped in history acted out by Indians and early day mountain men. Its alpine passes and river valleys served as passageways for Western tribes trekking to the east in search of buffalo on the prairie lands beyond the mountain wall. Lewis and Clark Pass on the southern end and Gateway Pass, the headwaters area for the South Fork of Birch Creek, were favored routes. The Blackfeet Nation controlled lands that border the peaks on the east and to protect their hunting grounds, warriors were sent into the mountains to ambush those heading toward the plains.

At the confluence of the North Fork and South Fork of the Sun, to the west of Gibson Lake, Indians frequented the Medicine Springs. Pictographs are evident in this area, and atop Half Dome Crag, west of Heart Butte, Native Americans received visions from the Great Spirit. Travois tracks on the Great North Trail, used by prehistoric man and by Indian tribes in recent history, are still discernable along the Rocky Mountain Front.

The Rocky Mountain Front with its celebrated relief and towering limestone walls rising upwards of 1,000 feet or more from the prairie, is the eastern-most range. Steamboat and Ear mountains, as well as Castle and Sawtooth reefs, are prominent for 50 miles or more to travelers pointing west across the high plains of northern Montana. It was the abrupt rise of this massif that gave the name "land of the shining mountains" to Montana. In the summer of 1805, while moving against the current of the Missouri toward the Rockies, Meriwether Lewis in



From above E

his journal noted the “shining Mountains” to the west, explaining that the sun glancing off of the snow gave the mountains a “glittering appearance.”

The valleys of the Two Medicine, Sun and Dearborn rivers separate the Rocky Mountain Front from the Continental Divide Range. The impressive features of this watershed chain are the incredible 13-mile-long Chinese Wall and the Scapegoat Mountain complex.

Spotted Bear, the Middle Fork of the Flathead, the White and several other rivers come between the Divide and a central massif of mountains. The Flathead Range to the east of Hungry Horse Lake is the northern segment and its Great Northern Mountain is the most visible summit in the area. Prominent points farther south are Silvertip and Pagoda mountains and the Flathead Alps - a cluster of peaks just south of the Chinese Wall including Junction Mountain and the Pearl Basin country.

The big valley formed by the South Fork of the Flathead and Danaher rivers separates these central uplifts from the Bob’s western-most mountains, the Swan Range. The Swan Peaks, and those adjoining it to the south and east, including those near the town of Lincoln and the Monture Creek country just north of the Black-

foot Valley, represent the largest of the mountain masses of the Bob Marshall country.

Compared to other Montana mountains, the summits of the Bob Marshall are vertically challenged – none top 10,000 feet. Red Mountain, at 9,411 feet, is the highest. However, due to their imposing relief, these peaks appear to soar higher than most. Heavy snow loads, especially in the Swan Range and just south of Glacier Park, have helped maintain a few high cirque glaciers. These small alpine ice fields, existing on the slopes of Swan Peak, Holland Peak and Great Northern Mountain, are remnants of the big valley glaciers that helped sculpture the wilderness.

The wildlands of the Bob Marshall, Scapegoat and Great Bear are known for their mixture of big meadows and dense forest cover. This pristine country abounds with ponderosa, larch, Douglas fir and lodgepole pine, as well as aspen and cottonwood trees. Purple and blue lupine intermingle with the red and orange shades of Indian paint brush on open slopes; yellow columbine, purple twining clematis, blue harebells, the elusive, mountain orchid the lady slipper, and the wispy fragrant bedstraw are strewn along cool forested trails. The meadows along the east side of the Chinese Wall and Scapegoat Moun-



Bear Lake looking west at Prairie Reef, the Red Buttes and the Chinese Wall and across “The Bob.” Photo: Rick & Susie Graetz

tain present some of the most stunning displays of bear grass in Montana.

Virtually all the terrain of the wilderness country and surrounding land is under U.S. Forest Service management and is accessible to the public. The sharp rise of the Swan Range and a dearth of canyons limit access on the west, but all other areas are reached easily by roads to or near the wilderness boundary. The Rocky Mountain Front on the east and the southern area has the most entry points. Horse travel is a popular way to visit the backcountry and many outfitters and guides

second week in July.

The heaviest human use is from early July until early September. Later, and on into November, come the hunters. Travel, especially beyond the trails, without skis or snowshoes, becomes difficult after mid-November, and sometimes sooner.

In recent years, Montana sportsmen have established three Rocky Mountain Front wildlife preserves - the Sun River, Ear Mountain and Blackleaf game ranges - to protect the wildlife population. Other private efforts, such as the Teddy Roosevelt Ranch and the Nature



Looking towards the Rocky Mountain Front near Browning and the Badger Two Medicine Country of the Bob Marshall Country (Photo Rick and Suzie Gratez)

offer trips for sightseeing, hunting, fishing and floating. Backpacking, snowshoeing and skiing are probably the most intimate ways to explore this big land. An excellent trail system provides routes in all directions. The roads that lead into or near the wilderness boundary provide a great sampling of what is available in the backcountry. Forest Service campgrounds along these routes are for the enjoyment of those not able to, or not desiring to, hike the land beyond.

The Bob may be visited any time of the year, but it is easiest to travel the backcountry in the summer months. Spring, with its melting snows and high run-offs, is perhaps the least desirable time. Peak run-off can occur between early May and mid-June. By mid-June most of the smaller streams can be crossed. The bigger waterways are still running fast and deep until about the

Conservancy of Montana's Pine Butte Swamp Preserve - where the grizzlies continue to roam the prairie as they did when Lewis and Clark came through - add to the public's awareness of this phenomenal landscape. Today, because of all of these entities' concerns, the elk and deer population of the Rocky Mountain Front area is far greater than at the turn of the 20th century. Elk have particularly done well as wildlife biologists consider this to be the nation's second largest migratory herd. And the big horn sheep population that makes a living here is one of the largest and most important in the nation.

Approximately 1,849 miles of trail extend throughout the Bob Marshall wilderness complex. This total does not include trails outside the boundaries of the three wilderness areas. There are extensive ribbons of those in the nearly one million acres of wildlands

contiguous to the designated wilderness. For instance, it is about six miles from the trailhead of the West Fork of the Teton to Teton Pass and the Bob's boundary.

The trail system got its official start in 1903 when the USFS constructed a route extending from Ovando to the Danaher Meadows, a distance of 21 miles.

Offering a myriad of wilderness experiences, the Bob Marshall country has created for me a priceless collection of memories: standing atop the Chinese Wall with a fresh wind blowing in my face... a full moon illuminating snow-covered Silvertip Mountain... storm clouds lifting to unveil the sheer face of the Swan Range... stars so brilliant they beg you to touch them... peaceful walks through Big River Meadows... hundreds of elk grazing on the slopes above the North Fork of the Sun... skiing untracked deep powder near Circle Creek... picking wild strawberries along the South Fork of Birch Creek... fly fishing the wild South Fork of the Flathead... lightning striking the rocks around me on top of Scapegoat Mountain... virtually swimming in a sea of bear grass along Halfmoon Creek... being on the summit of Mount Wright at 40 below zero viewing countless rainbows floating in the ice-crystal-filled air of the valleys below... gazing in awe at the incredible expanse of wild country stretched out before me from the top of Rocky Mountain Peak... reveling in an impromptu outdoor banjo concert at the Beartop Lookout Tower... and hearing a wolf greet the dawn with song at Gates Park.

Representing many things to many people, this untamed territory is a chance to experience wilderness



at its best. It is a charmer, a caster of spells, and a silver-tongued devil that captures your soul. One visit will convince almost anyone that wilderness is worth having. The Bob Marshall country is indeed a national treasure and thanks to the foresight of early-day conservationists, these magnificent mountains, canyons, rivers and valleys will remain wild and free.

NEXT PAGE: The sun says goodnight to Glacier National Park's Livingston Range – taken with student Mattie Weber's camera – Rick & Susie Graetz photo







THE

MAN

Bob Marshall is credited with single-handedly adding 5.4 million acres to the nation's wilderness system, and in 1941, two years after his death, 950,000 acres of western Montana wilderness were set aside in his name. The first snow that September was as unpredictable - and fierce - as ever. In a few short hours, the season catapulted from late summer, across autumn and smack into the frigid middle of January. Flowers and berries disappeared under the snowy blanket. Moss-topped boulders turned to icy blocks. The path muddled. Everything that made the forest warm and colorful had vanished.

By SHERRY DEVLIN

Photos courtesy of the US FOREST SERVICE
and the WILDERNESS SOCIETY

The first snow that September was as unpredictable - and fierce - as ever. In a few short hours, the season catapulted from late summer, across autumn and smack into the frigid middle of January. Flowers and berries disappeared under the snowy blanket. Moss-topped boulders turned to icy blocks. The path muddled. Everything that made the forest warm and colorful had vanished.

Now, as nightfall approached, the young woodsman was soaked and chilled--and lost in a howling snowstorm high on the Lolo Trail, somewhere in Montana or Idaho.

"I stopped in the soggy twilight to look at the map," he later wrote, "and observed with concern a discrepancy between my imagined position and the compass. With a cold, shrinking feeling in my stomach, I went over in my mind all the instructions, every fork in the trail, and could not recall a single dubious turn."

But young Bob Marshall had come West for a taste of the pioneer life, and a night alone in the howling winter wilderness promised just such an adventure. "On a snowy September night, a century and a quarter before," he remembered, "Lewis and Clark had been camped here, two years from the nearest settlement, winter closing in, food almost gone, meat unprocurable by the best hunters ... And I was worrying about a single miserable night."

Not only did Marshall survive his first scuffle with nature in the wintry Selway Bitterroot Wilderness, but he eventually weathered an Arctic shipwreck, a grizzly attack, scores of assaults on previously unclimbed peaks and innumerable grueling day hikes of 50 miles or more.

By his sudden death - of a heart attack at the age of 38 - Marshall was himself a legend, a 20th-century Lewis and Clark, the first white man to scale Alaska's central Brooks Range, a best-selling author, a radical bureaucrat and tireless advocate of wilderness preservation.

Marshall is credited with single-handedly adding 5.4 million acres to the nation's wilderness system and 16 natural reserves to Indian lands. He lobbied for preservation of Alaska's freezing winter lands long before other conservationists took up the cry. And in 1935, he was the catalyst around which the Wilderness Society was created.

In 1941, two years after Marshall's death, 950,000 acres of western Montana wilderness were set-aside in his memory. Today, the Bob Marshall Wilderness is the acknowledged crown jewel of American wildlands, a fitting tribute to the man who once wrote: "We can afford to sacrifice any other value for the sake of retaining something of the primitive."

Born to a wealthy Manhattan family in 1901, Marshall spent his city-bound boyhood "dreaming of Lewis and Clark and their glorious exploration into the unbroken wilderness which embraced three-quarters of a continent."

"Occasionally, my reveries ended in terrible depression," he later recalled, "and I would imagine that I had been born a century too late for genuine excitement."

Then young Marshall discovered the reddish-brown reports of the "Topographical Survey of the Adirondack Wilderness," tucked away at the bottom of a book-case in his family's summer retreat on Lower Saranac Lake, N.Y.

"Immediately, he became enthralled by the accounts of explorations in the mountains which surrounded us," wrote his brother George. "We determined to penetrate those mountains, which previously had been accepted as a scenic backdrop along the skyline across the lake."

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At first, the brothers were content with walks around Lower Saranac Lake. Then came the fishpond and pathless woods. Then the floating bog. "Every ridge and hollow and deer runway within the forest where we lived became familiar to Bob and he gave them such names as

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Found Knife Pass, Squashed Berry Valley and Hidden Heaven Rock." George remembered.

On August 15, 1916, the Marshall boys climbed their first Adirondack peak - Ampersand - a 3,365-foot mountain south of their summer home. Six years later, the Marshalls - together with old-time Adirondack guide Herb Clark - had climbed 42 of the region's 46 peaks above 4,000 feet. Eventually they climbed all 46.

Marshall had found his "genuine excitement."

"The sense of adventure which one gets in the wilderness reaches its perfection in the romance of mountaineering," he

wrote more than 20 years later. The glory of conquering a summit, which has baffled humanity by its ruggedness throughout all the passage of world history up to the present moment, affords elation to which nothing could equal.

Long before graduating from New York City's Ethical

Culture High School, Marshall had decided on a career in forestry and conservation. "I didn't have the remotest idea what forestry was," he once stated, "but I had a vague notion of thrilling adventures with bad men, of lassoing infuriated grizzlies and of riding down unknown canyons in Alaska."

Then, too, there was the example set by his father. An internationally known constitutional lawyer and Jewish unity leader, Louis Marshall led the fight in 1914 to retain New York's "forever wild" guarantee for Adirondack Park. He was a pioneer in bird protection reform and spoke harshly against the country's "hasty dismantling of her natural heritage."

The lesson wasn't lost on his son. In 1920, after a year at Columbia University, Bob Marshall enrolled at New State College of Forestry - where his father was a trustee.

But young Marshall still yearned for adventure. Immediately after graduation in 1924, he headed for a summer of mountain climbing and research at the Wind River Forest Experiment Station, near the Columbia River, in southwestern Washington.

In the spring of 1925, Marshall received his master's degree in forestry from Harvard and again headed West--this time to the Northern Rocky Mountain Forest and Range Experiment Station in Missoula. There he stayed three years working his way from Junior forester to assistant silviculturist.

It was in Missoula that the Marshall legend began.

"A real greyhound" in the words of one Forest Service colleague, junior forester Marshall spent nearly all his time in the backwoods of Montana and Idaho.

It was there, one September afternoon, that he wandered off the course in a blinding snowstorm. And there, too, that he came upon a pair of grizzly cubs one sunny summer morning.

"I stood watching their unconcerned antics with great interest," Marshall wrote in his Journal, "until all at once I heard a crashing noise behind. Wheeling around I saw a colossal grizzly, not 30 feet away, charging straight at me. 'There's not to reason why, there's but to climb or die,' so

I started on the run for a white bark pine which seemed to offer the closest haven. Up I went, faster than my un-aerial anatomy had ever progressed toward heaven. Up I went for about 10 feet, when in my haste I stepped too clumsily on a dead branch. It snapped and I flopped.”

Marshall survived the grizzly sow’s charge by playing dead. But he eventually contributed to his premature death by subjecting an already-frail heart to tortuous hikes in the Bitterroots, Flatheads, Missions, Cascades and Selkirks. Rarely was a day hike less than 40 miles; most totaled 50 or more.

“Up in northern Idaho, Bob decided to walk around the head of the East River drainage and when he got back to the Priest River Forest Experiment Station,” remembered retired forester Chuck Wellner in a recent interview, “he discovered he had traveled only 45 miles, he walked another five miles down the road so he could log 50.”

Ralph Space, retired supervisor of Idaho’s Clearwater National Forest, told of a 50-miler that Marshall made from Moose Creek Ranger Station in the Nez Perce Forest to the Bitterroot Valley near Hamilton.

“My fellas told me that when Marshall came in over the divide, he was so exhausted he would stumble, fall, lay there a while and then hike some more,” Space said. “He kept a record of any time he hiked over 50 miles. He really drove himself to the extremes.”

By the time he was 36 - two years before his death - Marshall had logged more than 200 wilderness hikes of 30 miles in a day, 51 hikes of more than 40 miles and several of up to 70 miles.

“Toting a 50-pound pack over an abominable trail, snowshoeing across a blizzard-swept plateau or scaling some jagged pinnacle which juts far above timber,” Marshall maintained, “all develop a body distinguished by a soundness, stamina unknown amid normal surroundings.”

And Marshall did indeed love the wilderness. “It is the perfect aesthetic experience,” he told Nature magazine readers in 1937. “It is vast panoramas, full of height and depth and flowing color on a scale so overwhelming as to wipe out the ordinary meaning of dimensions. It is the song of the hermitt thrush at twilight. It is the unique odor of balsams and of freshly turned humus. It is the

feel of spruce needles underfoot.”

A personable man, “filled with humor,” Marshall had little trouble finding wilderness converts among his friends. “He loved the feeling of wilderness - the animals, forests and waters,” said ecologist-writer Sigurd Olson in a telephone interview from his Ely, Minn. home.

“When Bob shared his feelings and experiences, whether



his writing or speaking, he had tremendous impact,” Olson said. “If he had lived even a normal life span, the history of our country and its wild places would have been a different story.”

But Marshall probably wasn’t cut out to be a “true scientist,” said retired forester Wellner, who had a long career as assistant director of the Intermountain Forest and Range Experiment Station in Ogden, Utah.

“His real love was the wilderness, not the office or research lab,” Wellner said. “When I took over Bob’s old records in Missoula, there were hundreds of notes scribbled on little scraps of paper. He just wasn’t too keen on details.”

Marshall also left behind hundreds of “tall but true” tales when he journeyed back East in 1928 to study for a doctorate at Johns Hopkins University.



“Like the one about the time we was going to a dance in Missoula,” Willner said. “Harry Gisborne (the fire research pioneer) was a great friend of Bob’s. Harry’s wife, Alice, noticed that Bob had a hole in his sock right above the heel. So Bob got some black ink, painted his heel and went on to the dance.”

Seasoned by his years in the West, and by the first of four treks to far northern Alaska, Marshall wrote his

most important wilderness thesis while at Johns Hopkins. Marshall called it “The Problem of the Wilderness.” His admirers called it “The Magna Carta of the Wilderness Movement.”

In the Scientific Monthly report, Marshall warned that the “shrunk remnants of an undefiled continent are being despoiled.” Valleys that once knew “only footsteps of wild animals” now know the terrors of modern highways, he said. Gone is the ground cover of fresh sorrel and twinflower. Here to stay is “asphalt spotted with chewing gum, coal dust and gasoline.”

“Within the next few years the fate of the wilderness must be decided,” he said. “This is a problem to be settled by deliberate rationality and not by personal prejudice.” What followed was a step-by-step rationale for the preservation of wild country.

Anticipating protests by timber companies, Marshall explained that “what small financial loss ultimately results from the establishment of wilderness areas must be accepted as a fair price to pay for their unassessable preciousness.”

The doctrine of “the greatest good to the greatest number” does not apply to every acre on earth, Marshall said. “If it did,” he wrote later, “we would be forced to change our metropolitan art galleries into metropolitan bowling alleys. The Library of Congress would become a national hot dog stand, and the new Supreme Court building would be converted into a gigantic garage where it could house a thousand people’s autos instead of Nine Gentlemen of the Law.”

What was needed, then, Marshall concluded, was “the organization of spirited people who will fight for the freedom of the wilderness.” Without their help, “there will be countless souls born to live in strangulation,” he said, “countless human beings who will be crushed under the artificial edifice raised by man.”

The seeds of the wilderness movement thus planted and a doctorate in hand, Marshall fulfilled his lifelong dream early in 1931 and left for a 13-month sojourn to the basin of the Koyukuk River in Alaska. There he found Wiseman, a self-sustaining Arctic hunting and mining village of 77 whites, 44 Eskimos and six Indians spread over a land as large as Massachusetts and New Jersey combined.

Content as he never would be in Washington. D.C., Marshall mapped the Koyukuk drainage and much of the central Brooks Range. He scaled a long line of previously unclimbed peaks, named hundreds of geographic features (like Frigid Crags, Midnight Mountain and Blarney Creek) and relished in "the most glorious year of my life."

His return to the east in 1932 brought Marshall's greatest literary success, the publication of "Arctic Village." Forum magazine called it "the personal biography of a wilderness settlement." Others heralded it as a "valuable sociological document fit to join the works of Margaret Mead."

But for Marshall, "Arctic Village" was a testimonial to all that is right about wilderness and life in the wilderness. "The Inhabitants of Koyukuk," he wrote, "would rather eat beans with liberty, bum candles with independence and mush dogs with adventure than to brave the luxury and the restrictions of the outside world. A person misses many things by living in the isolation of Koyukuk, but he gains a life filled with an amount of freedom, tolerance, beauty and contentment few human beings are ever fortunate enough to achieve."

His return from Alaska also brought Marshall's first major report for the Forest Service - "The Forest for Recreation and a Program for Forest Recreation," part of the National Plan for American Forestry submitted to Congress in 1933.

Marshall was now more convinced than ever that America's wild lands were in jeopardy. "The universe of the

wilderness, all over the United States, is vanishing with appalling rapidity," he wrote. "It is melting away like the last snow bank on some south-facing mountainside during a hot afternoon in June."

The solution, he said, was the protection of 45 million acres - 9 percent of the nation's commercial timberland.

Of that amount, 3 million acres would be "superlative

scenic areas" like Yellowstone or Yosemite and 9.5 million acres would be "primeval areas or tracts of virgin timber in which human activities have never upset the normal processes of nature."

A third category - wilderness areas - required set-asides of at least 10 million acres in Marshall's plan. "And by wilderness," he said, "I mean regions sufficiently spacious that a person may spend at least a week or two of travel in them without crossing his own tracks."

The remaining 12.5 million acres, then, would be divided

between roadside scenic areas, campsites, forest residence areas and non-wilderness outing areas. And rather than ruin commercial timber interests, Marshall said, his plan would actually increase the value of their land.

The trick, he claimed, was proper forest management - which in Marshall's book meant nationalization of timberlands. "Public ownership is the only basis from which we can hope to protect the incalculable values of forest for wood resources, for soil and water conservation and



for recreations,” he wrote in *The People’s Forests*.

“The time has come,” Marshall said, “when we must discard the unsocial view that our woods are the lumberman’s and substitute the broader ideal that every acre of woodland in the country is rightly a part of the people’s forests.”

Retired Clearwater Forest Supervisor Space spent many an hour debating the nationalization of timberland with Marshall. “We talked quite a bit about Bob’s high regard for communistic funs of government,” Space said. “He believed that goods should be produced for service, not profit.”

And while socialist and communist theories were popular during the depths of the Great Depression, it was “unusual to hear a millionaire advocate that kind of system,” Space said.

Marshall, who inherited a fortune from his father, eventually left \$750,000 to a foundation “for the promotion and advancement of an economic system in the United States based on the theory of production for use and not for profit.” Marshall’s will entrusted another \$400,000 to his friends in the Wilderness Society with the stipulation that it would be used to “increase the knowledge of the citizens of the United States as to the importance and necessity maintaining wilderness conditions in outdoor America for future generations.”

“He was a wealthy guy, all right,” remembered Clyde Fickes, “He was a protege of Mrs. Franklin Delano Roosevelt and both of them had all kinds of money. If he wanted to fly to New Guinea, he didn’t have to worry about it.”

Still, Marshall preferred a simple life and in 1933 ac-

cepted the post of Forestry Director for the U.S. Office of Indian Affairs. There he pushed his wilderness work to the forefront lobbying the Interior Department for more roadless areas, setting aside wilderness areas on Indian reservations and organizing the Wilderness Society.

He wasn’t without his detractors, however. Once, confronted by a particularly reactionary congressman, Marshall fired off this response: “Because I’ve been out



in the woods and up in the Arctic a good part of the past five years, it may be that the Bill of Rights was repealed without my hearing about it.”

[In] 1937 when Marshall was named Chief of the Forest Service Division of Recreation and Lands, he finally was in the right place at the right time to turn his wilderness advocacy into action.

Every roadless area of more than 100,000 acres should be protected as “primitive land,” Marshall said. And for every proposed highway, irrigation project or lumbering job, there should be a comparison of values: “Do the increased benefits of this extension of civilization really compensate for the loss of wilderness values?”

Taking to the road with a fervor often unknown in bureaucratic circles, Marshall set out to “inspect” the wilderness he wanted to protect. In August 1937, the trek



was to northern Minnesota for a weeklong canoe trip with ecologist/author Olson.

Bob was full of enthusiasm for the canoe country," Olson said. "We paddled all through what is now the Boundary Waters Canoe Area and Canada's Quetico Provincial Park. He told me that something inside of him needed to get out in the wilderness - so that's what he did."

In 1938, the call went out to Mississippi where now retired forester Roswell Leavitt "left him off along the road so he could hike 10 miles or so through the second growth southern pines." Another week it was New Mexico and an impromptu hike through desert brush and scrub pine.

"It was a good way of life for Bob," his brother George later wrote. "He enjoyed people just as much as the wilderness and needed both. He had a splendid sense of humor, great gusto and infectious enthusiasm."

The summers of 1938 and 1939 also found Marshall back among the people of Koyukuk and central Brooks Range. On his final journey, Marshall was shipwrecked in icy Arctic waters. "What an awfully easy way to die," he wrote. "I kept saying to myself 'Gosh, I wish I had time to think over all the swell experiences of my 37 years before dying - to have the fun of recalling them just once more before I go.'"

As fate would have it, Marshall had only a few months to live when he returned to Washington, D.C. after his final Alaska adventure. But in that time, he celebrated one of his greatest successes--adoption by the Forest Service of the "U" regulations, which prohibited logging in wilderness areas.

In November 1939, when Marshall died in his sleep while on a train to New York, his colleagues and friends were stunned. "If there is a Valhalla for the spirits of men, may Bob's spirit find there one of his beloved wilderness areas," wrote Forest Service Chief EA. Silcox.

"He was the one guy who could always pull you out of the squirrel cage and make you feel again the excitement, importance and opportunity in what you were trying to do," added a *New Republic* editorial.

"With his passing the cause of wilderness preservation lost one of its greatest champions," said ecologist Olson. "He would not be surprised to see that the battle for wilderness preservation is still raging. But Marshall knew the fight for wilderness would not be an easy one and, a year before his death, he penned what many believe to be his most fitting eulogy:

We're all young enough that we'll probably meet many defeats in the next 50 years. It's even conceivable that when we die we still will not have won the fight. But win or lose, it will be grand fun fighting and knowing that whatever we do in the right direction will help eventual victory."

This article originally appeared in the MISSOULIAN newspaper and then was reprinted in the book MONTANA'S BOB MARSHALL COUNTRY issued by Northern Rockies Publishing in 2004. Sherry Devilin is now the editor of the MISSOULIAN, Missoula Montana's newspaper. She has had several positions of responsibility with the paper and has served as editor for five years.



A Creation Story

“No man ever rode the crest of the wave of
life with higher purpose or more joyous-
ness than Bob Marshall.”

--F.A. Silcox



by Rick and Susie Graetz

The Chinese Wall looking north from below Cliff Mountain – Rick & Susie Graetz photo

Copies of original documents courtesy US Forest Service

In 1897, President Grover Cleveland established the Lewis and Clark Forest Reserve under the provisions of the Forest Reserve Act. At that time the Reserves were administered by the Department of the Interior. In 1905, the Forest Service was created along with the Department of Agriculture and in 1907, the Forest Reserves became known as National Forests. Until 1910, Glacier National Park was part of the Lewis and Clark National Forest Reserve, then the area was given national-park status.

On August 16, 1940, Secretary of Agriculture Henry A. Wallace designated the 950,000-acre Bob Marshall Wilderness, which was formed by combining three previously designated National Forest Primitive Areas - the South Fork, established in 1931; the Sun River, established in 1934; and Pentagon, established in 1933.

The boundaries of the original primitive areas seem to have been determined by hydrological divides. The South Fork of the Flathead, the Sun River and the Middle Fork of the Flathead are the three major drainages in the area. The Pentagon Primitive Area was often called the Big River Primitive Area, a name commonly given to the Middle Fork of the Flathead River.

The Great Falls Tribune, on February 24, 1934, reported the “Plan to create a primitive area on Upper Sun River approved by FA Silcox. Boundaries-Black Reef west of Allan Ranch, across North Fork Sun River-up Sheep Reef to divide between the Teton River and North Fork of Sun: thence northwest along Continental Divide to head of Basin Creek and west between west Fork River and South Fork Sun River, thence along Black Reef to North Fork Sun River.” The Allan ranch referred to in this article is today the Klick ranch at the confluence of the North and South Forks of the Sun.



The following is a copy of the original Forest Service document recommending the designation of the Bob Marshall Wilderness Area.

ABOVE: Bob Marshall – Courtesy of the US Forest Service



SERVICE BULLETIN

Contents



Confidential

VOL. XXIII, NO. 24

WASHINGTON, D. C.

NOVEMBER 27, 1939

ROBERT MARSHALL, FORESTER - CRUSADER

No man ever rode the crest of the wave of life with higher purpose or more joyousness than Bob Marshall. In electing his way of life, Bob chose mainly those activities which would help to make life better for those who need a hand or would preserve the quality of naturalness of some of our wild land. His ability to walk sixty miles a day in any man's country, and to finish with a spring in his step, typified the zest with which he tackled everything. He was as interested in a whimsical "study" of the dinner-table conversation of lumberjacks as in the I. Q. tests he made on Eskimos and his studies of Arctic vegetation. He was as passionately devoted to the development of organization camps for outings for the underprivileged children as to the preservation of wildernesses where those of special vigor and love of solitude might find adventure. And never a thought of personal prestige in any of his projects or his gifts to good causes.

Death came with shocking suddenness. Bob left Washington Friday night, November 10, on the Pullman for New York for a week-end family gathering. He was apparently in good health, and was looking forward eagerly to the family reunion. His death was discovered on the arrival of the train in New York, and was evidently due to coronary thrombosis.

Men like Marshall can ill be spared. He was a force for many good movements. He had the mental and physical vigor to drive ahead and to inspire and arouse enthusiasm in others. His joyousness and his lively sense of humor were contagious. His capacity for friendship had no bounds. He was "Bob" to hosts - from Justices of the Supreme Court to his beloved friends of the Arctic. Surely no man ever had more friends to mourn him.

But Bob would not want to be mourned. His going was shockingly premature, but he was not afraid to go. He came close to death in Alaska last summer. If there is a Valhalla for the spirits of men, may Bob's spirit find there one of his beloved wilderness areas - something to bring forth that expression we often heard him use, "Gee, this is swell!"

F. A. SILCOX.

Chief.

BOB MARSHALL WILDERNESS AREA

A great "back country" mountain and mountain-valley territory lying astride the Continental Divide in the Flathead and Lewis and Clark National Forests in western Montana, as more definitely shown on attached map.

The area includes and is bounded coincidentally with the limits of "primitive areas" of several years standing established under Regulation L-20:

South Fork - designated May 20, 1931.

Pentagon - designated October 18, 1933,
enlarged July 5, 1939.

Sun River - designated February 23, 1934.

These will continue to be called the South Fork Unit, Pentagon Unit and Sun River Unit of the Bob Marshall Wilderness Area, with minor changes of boundary to insure that the titles are truly significant.

Establishment of a wilderness area composed of these three primitive area units will involve no present change in requirements, since the particular restrictions added, at the time of their designation, to the restrictions under Regulation L-20, bring the provisions well within the requirements of Regulation U-1. Advertisement and 90 days' notice will not be necessary. The condition imposed, as no. 7 in the designation of February 23, 1934, for the Sun River Unit, making the designation subject to the existing First Form Reclamation Withdrawal, will, of course, continue.

The aggregate acreage will approximate 950,000 - area largely unsurveyed, the figure cannot be more precise. Of this aggregate, approximately 8% in odd-numbered sections in the extreme southwest part is alienated.

There is no demand for timber. Range use by domestic stock is limited to saddle and pack animals. The tract is of highest importance for watershed protection, especially on the Atlantic side of the Divide.

The country has great and outstanding natural and primitive allure, which has attracted constantly increasing numbers of visitors even before its primitive area designation. Inspiring are the spectacular scenery and undisturbed naturalness of the less rugged main stream valleys. Despite substantial use in some spots, wild life and good fishing continue abundant everywhere.

The Sun River and South Fork Units are already quite well known nationally as well as locally by all interested in wilderness areas. Local public sentiment has staunchly supported establishment of the primitive areas, and no questions are expected in regard to the change here recommended.

This area was one of the first in which "Bob" Marshall made his explorations and hikes in this region. He was largely instrumental in its continuance in primitive condition. It is one of outstanding and well known wilderness areas that was among the earliest designated. It conforms fully to the ideal conception of a wilderness area. A worthy monument, indeed, does it make to his memory.

Appropriate favorable action is strongly recommended to redesignate the existing primitive areas into one wilderness area as indicated.

August 10, 1940

Date

Frank Kelley

Regional Forester

Approved:

August 15, 1940

Date

Earl H. Clapp

Acting Chief, Forest Service

Approved:

August 16, 1940.

Date

H A Wallace

Secretary of Agriculture

A Science and Public Policy Story by **Ric Hauer**

Ric Hauer is a Professor of Limnology at The University of Montana's Flathead Lake Biological Station. His research interests include the fields of stream and wetland ecology. In summer he teaches the popular Rocky Mountain Ecology course.

I have had the distinct privilege to spend most of my adult life in the Crown of the Continent as a Professor at the University of Montana's Flathead Lake Biological Station. I have been fortunate to have trekked in Nepal, visited the Shining Light Mountains of central Asia, trekked and studied in Chilean and Argentine Patagonia, but there is no place on the planet quite like "The Crown" and nowhere else that I would have preferred to live out my life. As a stream and river ecologist interested in large systems, there is no better place to study the intricacies of aquatic life and challenge one's mind in the enterprise of discovery. Indeed, the Crown of the Continent and the University of Montana have attracted some of the finest ecological and environmental scientists in the world.

In business one of the axioms of success is location, location, location. The Crown of the Continent Ecosystem is exceptionally well positioned on the planet located midway along the Rocky Mountain spine that extends from New Mexico to the Yukon. The Crown, of course, received its name by being the focal point of three of the great river basins on the North American continent, the Columbia River, which drains to the west and the Pacific Ocean, the Missouri River, which drains to the east, the Mississippi and then to the Gulf of Mexico and the Atlantic Ocean, and the Saskatchewan River, which drains to the north to the Hudson Bay and the Arctic Ocean. Thus, the Crown is a "melting pot" of convergence for plants and animals from the prairies, the maritime of the west coast, the southern Rockies and the Canadian Rockies. The Crown also possesses great variation in landforms and distributions of elevation and climate over steep ecological gradients from alpine to low valley floors and dry sagebrush meadows to wet cedar forests.

In 1932, Glacier National Park in the USA and Waterton Lakes National Park in Canada were designated as Waterton-Glacier International Peace Park. These parks form the heart of the Crown and their declaration as the world's first International Peace Park celebrates the longstanding peace between the two nations. Both Glacier and Waterton have been desig-

nated as United Nation's Biosphere Reserves and as a single World Heritage Site. Massive uplifted geology, coupled with repeated glaciation, has resulted in a spectacular landscape. Broad u-shaped valleys and hanging glaciers, a multitude of glacial lakes and horn-shaped peaks give Waterton-Glacier its distinctive character and its strong appeal to the human heart

One of the Crown of the Continent's most remarkable features is the spectacular geology of the Lewis Thrust Fault. Considered one of the world's classic geologic structures, the Lewis Overthrust slid thick layers of sedimentary rock along the fault line leaving mountains with upturned edges that stand like parapets rising from the plains of eastern Montana. Because of the overthrust, the mountains in Waterton-Glacier have rock on their tops 1.3 billion years older than the rock underneath. These Precambrian mudstones give Waterton-Glacier its distinctive red and green colors that also make the streams and rivers so strikingly beautiful. This geology also produces exceptionally pure water. The waters of the Crown are world famous for their extraordinary clarity.

Northwest of Waterton-Glacier Park in southeastern British Columbia the geology of the Lewis Overthrust gives way to Jurassic-Cretaceous aged formations that bear the East Kootenay Coalfields. Three separate fields extend from just north of the USA - Canadian border northward toward Banff and Jasper. Known respectively as the Flathead, Crowsnest, and Elk Valley coalfields, those in the Elk Valley have been producing metallurgical coal since 1898 and today include five open-pit mines. The Crowsnest Coalfield extends from southeast of Fernie BC and north of Sparwood, south into the headwaters of the North Fork of the Flathead River. Flowing from its headwaters in British Columbia, the Transboundary North Fork flows into Montana and forms the western border of Glacier National Park. The Transboundary Flathead River has been referred to as one of America's wildest rivers in reference to its pristine water quality, abundant and diverse aquatic life, and that the Transboundary North Fork valley boasts the full complement of mid-to large carnivores present at the time of Lewis and

“The Crown is a “melting pot” of convergence for plants and animals from the prairies, the maritime of the west coast, the southern Rockies and the Canadian Rockies.”



ABOVE A bull trout and westslope cutthroat trout spawning and rearing tributary stream flowing out of the Continental Divide toward the Transboundary North Fork Flathead River in British Columbia. (Photo by Garth Lenz)



LEFT McDonald Creek and the Garden Wall along the Continental Divide in Glacier National Park. (Photo by Ric

Thirty-five years ago, a Canadian mining company proposed a mountain-top removal, strip coal mine in the two Flathead Coalfield deposits near the Montana – British Columbia border. Following review by the International Joint Commission (Boundary Waters Treaty - 1909) and recommendations from scientists in the mid-1980's that the coal mine would harm US waters and migratory bull trout, BC withdrew its permit. However in 2004, a different coal mining company proposed another coal mine in the headwaters of the Flathead in the Crowsnest Coalfield. Complicating matters, in 2008 British Columbia proposed coal bed methane exploration for the Crowsnest Coalfield including the Flathead, and Max Resources of Canada discovered gold deposits in the basin.

Under the threat of industrialization and intensive open pit mining in the Flathead River basin, the US responded in 2005 in a way not too dissimilar than that of 1975. Citizens in both the US and Canada were concerned that the water, aquatic life and wildlife of

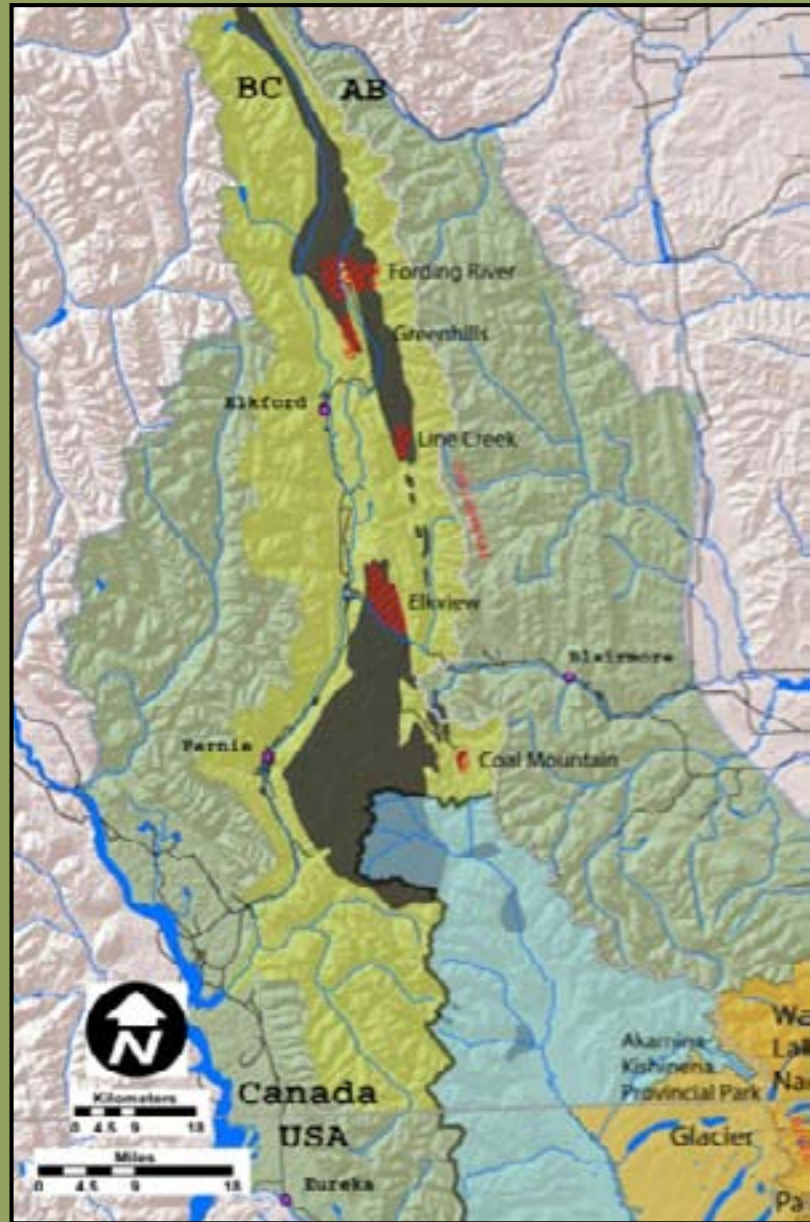
the Transboundary Flathead would be irretrievably harmed. The US established a science team to conduct a comprehensive environmental assessment. We developed a series of intense investigations into the potential and likely impacts of coal mining and coal bed methane development. But, we did something not done in the 1970's, we developed an experimental design that included comparative analysis between the Flathead and the Elk River Basins; the Elk having had over 100 years of coal mining. The scientific results were compelling. We knew that the water in the Flathead was particularly pure. But, we found that the Elk River and its affected tributaries showed >1000x the nitrate, 100x the sulfate, 10x the selenium concentrations of those found in the Flathead. Aquatic food webs in coalmine-affected waters of the Elk River lost biodiversity as many pollution-sensitive species of stoneflies, caddisflies and mayflies disappeared. In further contrast, the waters in the Flathead support non-hybridized westslope cutthroat trout and populations of endangered bull trout migrating from

Flathead Lake 100s of km to spawn in the pristine waters of the BC Flathead River .

Science has played an important role in identifying the harm coal mining has done in the Elk River basin, but science alone rarely brings fundamental change in policy. In August 2009, Secretary of the Interior Ken Salazar was hosted along the banks of the North Fork by Montana Senators Max Baucus and Jon Tester. A month later, a joint United Nations Educational, Scientific, and Cultural Organization (UNESCO)/International Union for Conservation of Nature fact-finding mission visited the Flathead in Montana and British Columbia to investigate whether the proposed mining was a threat to Waterton-Glacier International Peace Park. The UNESCO mission listened carefully to the scientists' results. Their report concluded that mining in the Flathead would be "incompatible" with Waterton-Glacier as a UNESCO-designated World Heritage Site and Biosphere Reserve.

Finally, diplomacy at the provincial/state level and at the federal level between the United States and Canada was developed through personal relationships and mutual interest. Policy-makers in both countries respected the scientific and fact-finding analyses, and on 18 February 2010, Premier Gordon Campbell of British Columbia and Governor Brian Schweitzer of Montana signed an accord to prohibit coal mining, coal-bed methane extraction, and gas and oil exploration and development in the Transboundary North Fork of the Flathead River Basin. However, a Memorandum of Understanding (MOU) is a soft document that can be nullified easily by either party.

In 2010, Senators Baucus and Tester introduced Senate Bill 3075 that would withdraw mineral mining and oil and gas extraction from future development on the US side of the Transboundary North Fork. Senator Baucus negotiated with oil and gas companies for their voluntary abandonment of lease claims in the North Fork. To date approximately 80 percent of those oil and gas claims have been relinquished. Although US Senate Bill 3075 was buried in election year politics in 2010, Senators Baucus and Tester have reintroduced the "North Fork Watershed Protection Act of 2011" to permanently protect the US portion of Transboundary North Fork Flathead River. Almost exactly one-year after the signing of the accord between Montana and British Columbia, the Nature Conser-



vancy of Canada (NCC) and The Nature Conservancy (TNC-US) committed \$9.4 million to the government of British Columbia to conclude the historic BC - Montana MOU. As part of the deal, BC will enact legislation banning the extraction of minerals, oil, gas, and coal within the British Columbia portion of the Transboundary North Fork Flathead River watershed.

But more needs to be done. In the summer of 2010, Headwaters Montana, Wildsight from BC, and other citizen groups collected over 500 signatures on one weekend at Logan Pass petitioning to expand Waterton – Glacier International Peace Park into the British Columbia portion of the Crown on the east side of the Transboundary North Fork Flathead River. We also need to complete a comprehensive, rational, and scientifically based Landscape and Riverscape Conservation Management Plan that incorporates the entire



LEFT Map of the Transboundary North Fork of the Flathead River watershed and northern portions of the Crown of the Continent showing the coal fields Elk and Flathead basins and the open pit coal mines of British Columbia in the Elk watershed.

ABOVE Harvey Creek, a tributary of the Transboundary North Fork of the Flathead River in the British Columbia portion of the watershed. Along the right of the photo is the southern edge of the Crows-

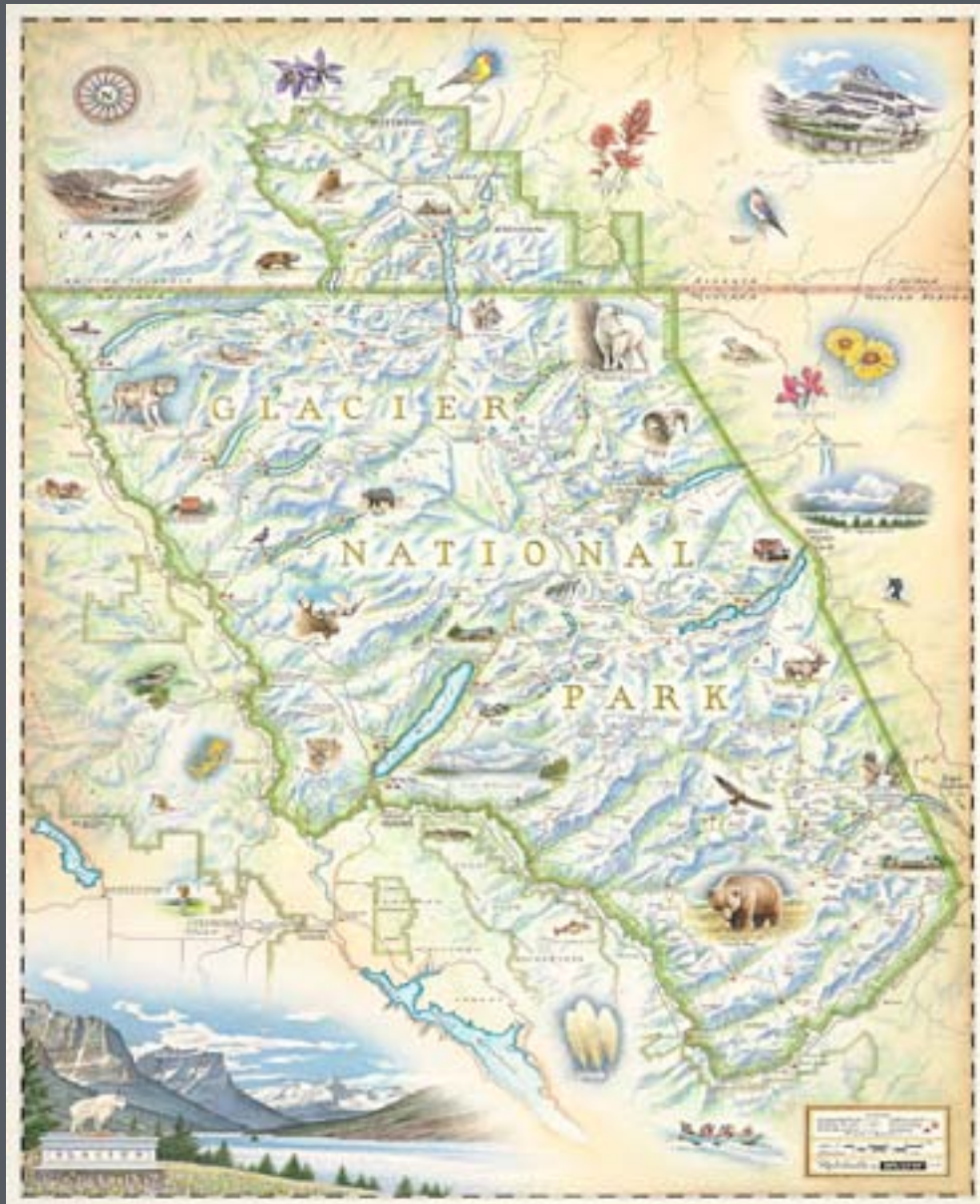
North Fork watershed into a single management plan that brings together the multiple partners that cross agency and international boundaries. Throughout the process, scientific results have played a central role in providing the backbone for a change in management policy. However, without both the political and civic engagement the science is just dry bones. Change in the Transboundary Flathead and its vital role in the life of the Crown of the Continent had flesh and muscle put on those bones through resolute policy and relentless political pressure. Many environmental NGOs supported the need for changed policy. The superintendents of Waterton and Glacier Parks made their concerns well known. The Montana congressional delegation strongly represented US interests. The Governor of Montana and the Premier of British Columbia were able to come to agreement that the Transboundary Flathead is ecologically too important to risk the loss. This case will stand as an international model in which

the natural goods and services provided by a World Heritage Site and Biosphere Reserve and the good will between the US and Canada were ultimately valued over the commodities of natural-resource extraction. Acknowledgements ● ● ●

I began my studies of the Flathead River System as a PhD graduate student in the mid-1970's with Jack Stanford, the Director of Flathead Lake Biological Station since 1980. Jack is an inspiration to all who desire to conduct science on the Ecology of Systems and advocate for natural resource conservation. Senator Max Baucus has been a stalwart supporter of the Transboundary Flathead for over 35 years. His dedication to the Flathead and the Crown of the Continent has been critical to the success achieved. Clint Muhlfeld of the USGS has been a powerful force in the conservation of Crown bull trout and westslope cutthroat. Erin Sexton has worked tirelessly as the Transboundary Coordinator maintaining linkages between US and Canadian agencies, NGOs, and Foundations. Harvey Locke has been instrumental as a leader of broad based conservation in the Transboundary Flathead. The NGOs, [CPAWS, NPCA, Headwaters Montana, Wildsight, Flathead Lakers, Flathead Coalition, and others] have played an enormously important role in protecting the Crown of the Continent Ecosystem. A special thanks to the Nature Conservancy of Canada (NCC) and The Nature Conservancy (TNC-US) for their commitment to the Crown of the Continent and its preservation. My wife, Brenda, has been my constant companion and shares my deep love for The Crown.

Hand Drawn History

A beautiful detailed hand-illustrated map of Glacier National Park printed on heavy paper and suitable for framing, a perfect gift for the Holidays.



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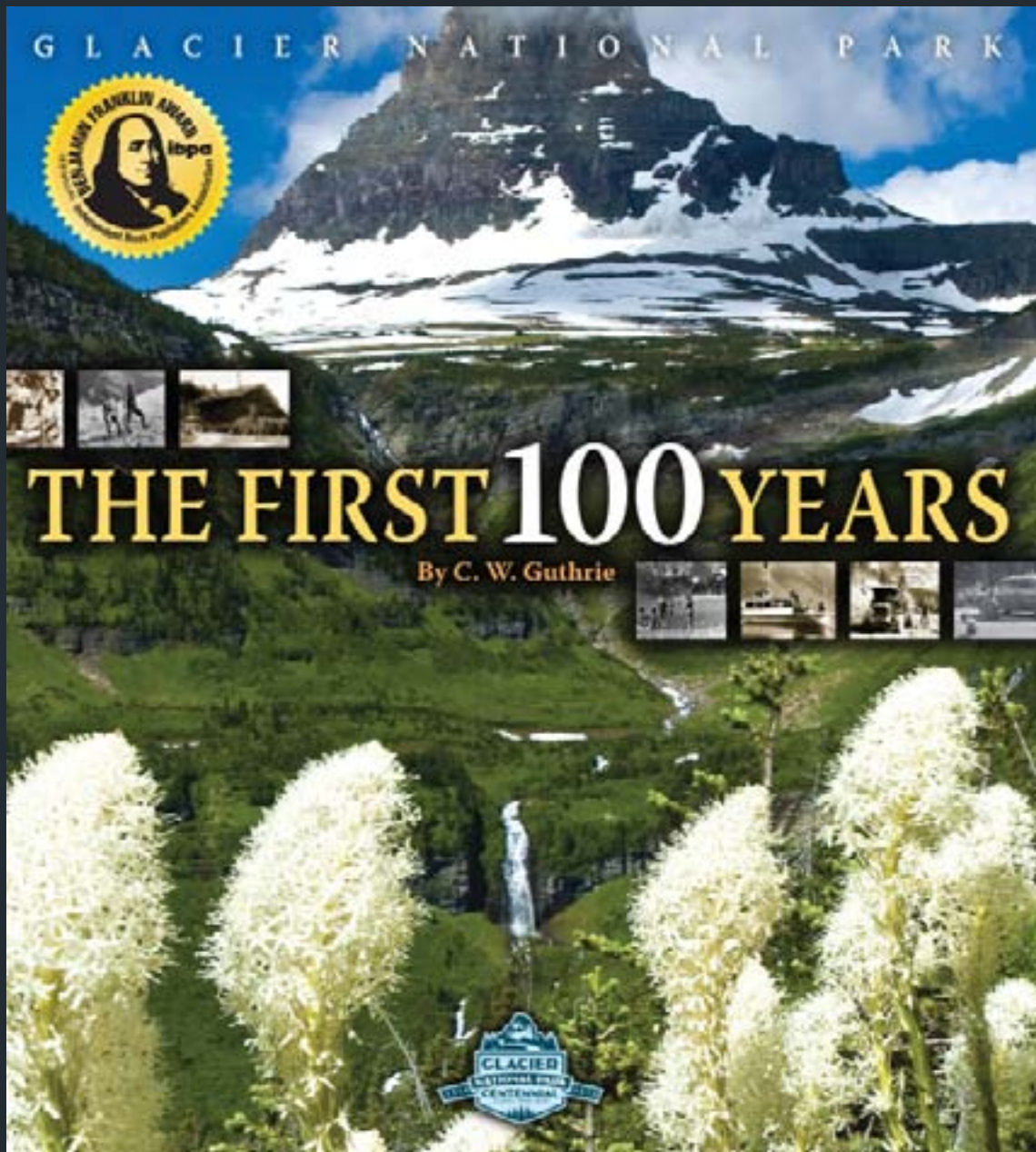
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VIEWS OF



THE CROWN





PREVIOUS PAGE: Many Glacier area GNP

ABOVE: Maskinoge Lake Waterton Lakes NP Canada

*LEFT: Prince of Wales Hotel and Waterton Lake – Waterton Lakes NP
Canada*





Bowman Lake and Rainbow Peak GNP





INSET: Short-eared Owl
ABOVE: The great whitebird migration rests at Fr
NEXT PAGE: Sunrise on the Blackleaf Canyon are



*Freezeout Lake – Rocky Mountain Front
a Rocky Mountain Front*



MEET THE PHOTOGRAPHER CHUCK HANEY

Chuck Haney of Whitefish, Montana has been exploring all corners of Montana for more than 20 years. Mostly known for his richly colored landscape work he is equally adept at capturing the essence of outdoors subjects that he enjoys such as; hiking, paddling and bicycling. A recent book of Big Sky Country images, Montana Unforgettable marked his tenth book published.



In addition to his Montana adventures, Haney has traveled extensively throughout North America capturing a wide variety of subject matter that has resulted into a highly personalized style. Leading publishers throughout the nation regularly call on him for pictures to appear in their calendars and magazines. He can boast of having had over 150 cover photos to his credit.

Chuck teaches a series of popular photography workshop weekends during the year. For more information about his images including details about fine art prints, assignment work and monthly newsletter go to <http://www.chuckhaney.com/>

He can also be reached by email at chuck@chuckhaney.com or phone 406-862-0521.

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The following article profiles two Miistakis projects relevant to the Crown of the Continent. The first project on wildlife and highway design is especially relevant within the Crown and beyond, while the second project is firmly rooted within the Crown itself.



MAKINGWAY FOR WILDLIFE IN BANFF NATIONAL PARK AND BEYOND

The Miistakis Institute has partnered with the Western Transportation Institute at Montana State University, Parks Canada, the Wilburforce Foundation and the Woodcock Foundation to carry out an innovative and exciting project in Banff National Park with a focus of getting wildlife safely “across the road.” Banff National Park, Canada’s first national park, spans 6,641 square kilometres (2,564 square miles) of valleys, mountains, glaciers, forests, meadows and rivers in the Canadian Rocky Mountains. Banff National Park is located in Alberta, and it is situated approximately 128 km (80 miles) west of Calgary— just north of the Crown of the Continent. The Trans-Canada Highway— or TCH— bisects the park through the very heart of the Canadian Rocky Mountains, and has long been recognized as a lethal barrier to wildlife through collisions with vehicles and by reducing animals’ abilities to move through the landscape to find suitable habitat, food and mates.

However, over the past 25 years, efforts have been made to reduce the effects of the Trans-Canada Highway on wildlife within Banff National Park through the construction of wildlife overpasses (vegetated structures designed to allow wildlife to move over highways), underpasses (bridge structures that enable animals to pass underneath highways), and fencing designed to keep wildlife off of the highway right-of-way. These “road ecology” issues and solutions are relevant in the Crown where both highways and railways also act as barriers to wildlife movement for a number of species. Currently, an extensive wildlife crossing project to address these barriers is underway on Highway 93 in Montana.

In addition to the construction of the wildlife crossing structures, Dr. Tony Clevenger, the Western Transportation Institute’s Senior Wildlife Research Scientist, has been carrying out research and monitoring on these structures to learn what sort of characteristics are important to enable passage by animals that are sensitive to their habitat being fragmented. These species include grizzly and black bears, wolves, lynx and wolverine— species that also exist in the Crown. This research and monitoring project is known as the “Banff Wildlife Crossings Project”, and the results of this project are critical to informing how highways should be best designed with both people and wildlife in mind.

The Banff Wildlife Crossings Project has several objectives. The first objective is to collect data on the effectiveness of the crossing structures and the resulting conservation value of wildlife crossing structures in Banff National Park. An important component is to evaluate crossings by wolverine and Canada lynx across the Trans-Canada Highway and their response to newly-constructed wildlife crossing structures. There is little to no information anywhere in North America on whether these iconic subalpine and alpine species are adversely impacted by four-lane highways or if they will use the crossing structures. The second objective is to develop science-based guidelines for designing effective wildlife crossing structures and other practices to keep wildlife safe alongside transportation projects across Canada and North America.

Given the importance of sharing this information with a number of audiences, the remaining two objectives focus



Photos of the wildlife crossing structures credits are to Tony Clevenger/Western Transportation Institute

on communication: to present the scientific findings in major international journals, books, workshops and conferences on transportation, conservation and ecology; and, finally, to increase professional understanding and general public awareness of the Banff wildlife crossings. Ideally, success of these final two objectives will result in the development of similar wildlife crossing structures and best practices for highways throughout Canada and across North America.

As it is critical to communicate the findings of the Banff Wildlife Crossings Project to a wide audience, we have developed an outreach and education component for the project. Our goal for this is to increase transportation

of the Banff Wildlife Crossings Project. This will enable other communities, such as those within the Crown of the Continent, to develop sustainable transportation practices that are designed with both humans and wildlife in mind.

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istakis is in the process of developing a communications strategy that will guide the outreach program. Through this strategy we are aiming to ensure that the Trans-Canada Highway wildlife crossing structures are viewed by decision-makers as good investments for motorist safety and wildlife conservation. Additionally, we will generate

a greater understanding of, and increased support for, wildlife crossing structures and practices (such as highway fencing) within several audiences including local communities, visitors, and people driving on the Trans-Canada Highway. Finally, we will use the communications strategy to transfer information from the project's research and monitoring component to transportation and natural resource agencies so it can be applied in other regions and local communities.

Some of these initial action items for achieving these goals include: creation of video tours of the wildlife crossing structures to be distributed on the internet through social networks, developing and maintaining a project website, creation of a citizen science monitoring program, presentations of findings to transportation and natural resource practitioners,

and public art competitions conveying the importance of wildlife crossing structures.



structures, and animals that use them to safely cross the bustling Trans-Canada Highway in Banff. All photo
tern Transportation Institute. MSU

agencies' understanding of crossing structures and their benefits and community awareness so that other busy roads in Canada, and beyond, benefit from the findings

COLLABORATING IN THE CROWN



One of our current collaborative projects within the Crown of the Continent is “Cowboys and Carnivores.” The Miistakis Institute, together with the Drywood Yarrow Conservation Partnership (DYCP), is currently developing a landowner carnivore monitoring program for southwestern Alberta. The DYCP consists of landowners (ranchers) who live within the Drywood Yarrow Watershed. The group was formed to address watershed and other conservation issues, and has formed a carnivore subcommittee that is working to reduce conflicts with carnivores, such as depredation on livestock, and/or the consumption of grain and silage. One of the focus areas of Cowboys and Carnivores is on grizzly bears and wolves. Grizzly bears are attracted to grain bins, silage, desirable agricultural fields and carcasses left on the landscape. These interactions often result in an economic loss to the landowner and may lead to safety concerns. Wolves occur in the area and are involved in cattle predation, again resulting in economic losses to landowners. These conflicts often result in removal of carnivores involved in conflicts, which effects local populations of these species. Although the grizzly bear is not endangered in Alberta, it was recently listed as “threatened” in Alberta with population estimates for the province in 2010 at 691 grizzly bears. Wolves are not considered rare or endangered in Alberta.

Carnivore conflicts with the ranching community in southwestern Alberta are com-

mon and landowners recognize the need to monitor interactions with carnivores to assist in the development of solutions. Ultimately, the collaborative management between public and private land managers is essential to the long-term persistence of wide-ranging wildlife. It is beneficial to integrate private landowners into research on the long-term health of carnivore species in



Photos were taken by remote cameras

the region. In addition, monitoring of carnivore species is also an important component for the development of management strategies to address human wildlife conflicts occurring along the Eastern Slopes of southwestern Alberta.

Cowboys and Carnivores has three components. An on-line mapping tool will be created to enable landowners

to record and share carnivore observations and conflicts with other land owners and public land managers within the Drywood Yarrow Partnership. Second, remote cameras will be strategically deployed within the study area to document the presence of carnivores, to monitor conflict areas, and to evaluate the effectiveness of solutions, such as placing electric fence around grain and silage

storage. Finally, the project will use bear hair snagged on fence lines to do molecular genetic monitoring in order to get a very localized population estimate for grizzly bears.



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artners involved in the project include the Waterton Biosphere Reserve Association, Alberta Sustainable Resource

Development – Fish and Wildlife, and the Nature Conservancy of Canada. Funders for this project include the Waterton Biosphere Reserve Association, Wilburforce Foundation and Alberta Ecotrust Foundation. The Drywood Yarrow Partnership has also been working closely with the Blackfoot Challenge. Both landowners and government representatives have travelled to Montana to exchange information with Blackfoot Challenge partners, and to build off the successes of the Blackfoot Challenge. These efforts truly demonstrate how communities within the Crown can learn from each other and engage in collaborative conservation.

PEOPLE AND IDEAS

The Miistakis Institute brings people and ideas together to promote healthy communi-

What is the Miistakis Institute? We study the landscape, so we can help people maintain it; and we celebrate innovative research by making it accessible to communities and decision-makers. Our partners are leading-edge scientists, like-minded organizations, industry, government agencies and inspiring community leaders. Affiliated with the University of Calgary, the Miistakis Institute is an independent, non-profit charitable organization.

The Miistakis Institute has its roots in the Crown of the Continent. It was established in 1995 to bring together digital data related to land and resource management in this international region. Since then, Miistakis has evolved into a multi-faceted organization using spatial analysis, citizen science, wildlife research, land use planning and other approaches to address conservation issues in the Crown and beyond.

We are a relatively compact organization with a staff of eight people whose expertise ranges from computer programming and geographic information systems, to wildlife and landscape ecology, to economics and land-use planning. Our projects are diverse both in scope and content. In some instances, Miistakis is solely responsible for developing a project idea, raising funds and project implementation. However, the majority of our projects are collaborative by design and involve multiple partners and multiple Miistakis staff members from start to finish.

A number of current Miistakis projects focus on engaging community members to increase understanding about wildlife through citizen science programs. Miistakis has created interactive Web-based mapping tools and associated outreach and education programming to enable community members to contribute their observations and experiences with wildlife to complement existing conventional data. Currently, we have a number of citizen science programs: Road Watch in the Pass, Living with Coyotes, Wolverine Watch and Cowboys and Carnivores.

Road Watch in the Pass enables citizens to use an interactive Web-based mapping tool to enter wildlife observations along Highway 3 near Crowsnest Pass, Alberta. Created in 2004, Road Watch was developed to gather data on where large mammals cross Highway 3 to

inform transportation planning, and to empower citizens by highlighting the value of data collected by volunteers, and creating an environment where they can learn and share knowledge about local wildlife and conservation issues (see www.rockies.ca/roadwatch).

Using similar technology and citizen-engagement techniques, Living with Coyotes allows users to enter coyote observations in the city of Calgary into a Web-based mapping tool. On submission, the information is recorded into a database and users are able to view their own personal records as well as those of others. Understanding where coyote encounters occur and the types of coyote behavior observed, allows us to identify potential hotspots for conflict. The goal is to empower citizens to monitor these issues in their own neighborhoods, creating the necessary understanding so that human-coyote conflicts can then be managed or prevented (see www.rockies.ca/coyotes).

The Miistakis Institute also partners with government agencies at municipal, provincial and federal government levels on a diverse set of projects. For example, Miistakis is working with:

- the Municipal District of Ranchland, Alberta on a Community Conservation Values Mapping Project, identifying and mapping aspects of the cultural and physical landscape that are important to MD residents. These maps will be used to inform land-use decisions and to better communicate local values and priorities;
- the Alberta government on Transfer of Development Credits (TDCs), a market-based tool for communities to use in reconciling conservation and development activity in their community. The tool was recently enabled in the provincial Alberta Land Stewardship Act; and
- Parks Canada on a variety of projects including exploring best practices for remote camera use, reviewing the state of knowledge on mountain bike impacts, and identifying sage grouse habitat.

Sharing information broadly is one of the key tenets of Miistakis, as we strive to communicate our projects and share data widely. We work to make the results of the research and monitoring we are involved in available to local communities, government agencies, academics and others. Our goal is to see this information used to make more sustainable natural resources and landscapes for people and the ecosystems in which we live.

For more information on Miistakis and the work we do, please visit www.rockies.ca or find us on Facebook.

Science in the Crown

Documenting Cultural Use of Chief Mountain



Native people have maintained living relationships with the majestic landscape features of Waterton-Glacier International Peace Park for millennia. Many of the mountains, lakes, and valleys of the area hold religious and spiritual significance and have long been used for ritual and ceremonial purposes. The massif of Chief Mountain, which lies on the eastern boundary of Glacier National Park and is less than 5 miles from the Canadian border, is one of those special, sacred places.

While not the highest peak in the area, Chief Mountain stands ahead of the other mountains on the eastern edge of the Rockies and looks out over the plains. The most prominent peak along the Front Range, it can be seen for hundreds of miles around, from the highlands southeast of Calgary to the Sweetgrass Hills of eastern Montana. The mountain is jointly managed by Glacier National Park and the Blackfeet Tribe as it lies directly on the boundary between the park and the reservation to the east.

Betty Matthews, a member of the Blackfeet Tribe and an employee of the Tribal Preservation Office, undertook a study in 2005 to determine past and present use of Chief Mountain by the Blackfeet People. With a Master of Science degree in Anthropology that focused on the cultural and economic conflicts associated with European colonization of the area, Ms. Matthews was uniquely qualified to undertake the study.

Twelve interviews were conducted with representatives from three of the four Blackfoot bands: five interviews were carried out with the Southern Piegan, five with the Northern Piegan, and two with the Blood Tribe. Much of the information was given in traditional story form. Several themes emerged from the interviews that involve traditional use of the mountain, how it fits into Blackfoot culture and worldview, and thoughts that people have about how the area can be better managed.



Chief Mountain is sacred to the Blackfeet People. Betty Matthews, with the Blackfeet Tribal Historical Preservation Office, undertook an oral history study in 2005 to document traditional cultural use of the mountain by tribes of the Blackfoot Confederacy in the U.S. and Canada. (Photo by Jerry Fetz)

Some concern was raised in several of the interviews about trying to separate just one mountain and area from others. All land is sacred and all mountains are known to have power.

Nonetheless, Chief Mountain does hold special significance. It is considered the oldest spirit of any of the mountains and creation stories of the Blackfoot People are linked to it. Some believe there is an old man's spirit living in Chief Mountain. Thunder resides in the mountain and Thunder Pipe Medicine always refers to it. Brings Down the Sun received his bundle here, which contains the sacred power of thunder. Thunder brings an annual renewal of life to people.

Other information shared pertained to plants and animals in the areas and the proper preparation for seeking guidance at Chief Mountain. People were willing to share information at this time because it is important toward reclaiming lost spiritual and religious knowledge for the Blackfoot people. The interviewees also want to see more effort toward protecting the mountain from vandalism and casual use. Contact the CCRLC for full report. This project was funded by the International Conservation Programs Office (National Park Service).

Hardy Survivors of the Pine

By Melissa Sladek,
Science Communication
Specialist, CCRLC

The Crown of the Continent Research and Learning Center, created in 2002, is located in West Glacier in the park headquarters complex. It is part of a network of 20 Research and Learning Centers in National Parks, and its intent “is to make parks more accessible to researchers and research results more accessible to visitors.” For more information go to www.nps.gov/glac/naturescience/ccrlc-about.htm

P ausing to gasp in a breath of life-sustaining mountain air, I struggled to keep up with my companion and fellow co-worker on our journey toward tree line. Luckily, she became distracted by a rare alpine flower and stopped to show it to me. “This is a spectacular flower. It’s a *Potentilla uniflora*. Let’s see, I think the common name is...well, I can’t remember but look at the wooly hairs on its stem. These help protect the plant from the wind and cold. If you’re a plant up here, you have to be hardy.” Watching her turn and bound out of sight into the raw whipping wind, I started to realize that not just plants are tough at tree line. After reaching the summit and passing by a large gathering of bighorn rams, we finally reached our destination, a craggy twisted stand of whitebark pine trees. Trees so “hardy” that they not only tolerate, but actually pioneer poor soils, steep slopes, and windy exposures in subalpine and alpine environments. Stopping to look at the scene, I couldn’t decide what was more impressive, the crooked trees standing guard against the elements of the alpine or the people climbing in them.

I had accompanied Jen Asebrook, a lead botanist for Glacier National Park, up the Scenic Point Trail to learn about the efforts of the botany and revegetation crews in restoring this keystone species of upper subalpine ecosystems. Today the crews are caging cones, the first step in a series of many to save this declining species.

Much has been written about whitebark pine. I typically hear about the importance of its rich, fatty seeds as a food source for grizzly bears and other wildlife, especially in the Greater Yellowstone area. And at one time, before so many whitebark pines died, these seeds were also an important food source to bears in this region. The demise of this tree made me begin to wonder, “What other roles does whitebark pine play in Glacier and what might we expect to lose if it disappeared?”

Whitebark pine is classified as a keystone species, meaning it performs a role or function that increases the biodiversity of a community. This is true for moun-



tain ecosystems across the west, including Glacier. Its ability to colonize upper elevations after a disturbance, such as a fire, and in harsh, dry, windswept sites makes it a key component in subalpine forests. By doing so, it creates microenvironments, or pockets, protected from the drying wind and sun of high elevations. These “pockets” sustain a diversity of life. Other conifers, such as subalpine fir and Engelmann spruce, are able to grow with the help and protection of the established whitebark pines. In addition, a variety of undergrowth arises which, combined with the multi-aged trees, provides food, shelter, nesting sites, tree holes, and burrows to a variety of animals.

B ut whitebark pine trees are categorized as keystone species for more than the successional diversity they provide. Persisting in high, snow-laden elevations and unstable soils, these trees also help to regulate runoff and reduce soil erosion. Whitebark pines generally grow in clumps, forming dense tree islands in areas of heavy snowfall or on windy ridges.



of their crowns act as both a snow fence, piling up significant amounts of snow, and an awning, shading the snow from melting. Together, this slows the rate of snowmelt in areas of high runoff. The result is later melt-off and higher stream flows in the needed summer months.

According to research by Stephen Arno, whitebark pine trees were once found in 10-15% of forested lands in the northern Rocky Mountains. Today, it's a different story. During the last 70 years whitebark pine trees have rapidly diminished. In 2001, research by Kendall and Keane estimates 44% of whitebark pine is now dead in the park. This drastic reduction in numbers is primarily credited to white pine blister rust, a non-native fungus that infects five-needled pines, along with reduced tree

health from years of fire exclusion, and mountain pine beetle attacks. First reported in Glacier in 1939, white pine blister rust infects the branches and stems of whitebark pine trees, eventually causing cankers, which kill the branch and eventually the tree itself. In recent years, research has shown that certain whitebark pines, known as 'plus' trees, show phenotypic genetic resistance to blister rust, forming little to no blister rust cankers. It is these 'plus' trees that the crews were climbing and caging at Scenic Point.

Before I had a chance to put down my pack, shouts for Asebrook's opinion on measurements and 'plus' trees echoed up from the group of botanists gathered below. Jen dove into action, and discussions of cankers and cones ensued. I asked Jen Hintz, another park botanist, what happens to the cones after they are caged. Jen explained, "This is just a part of the whitebark pine restoration program in Glacier. We cage the cones to protect them from the Clark's nutcrackers and squirrels that eat them and then revisit the sites in the fall to collect the seeds. The seeds are then sent to the US Forest Service's Coeur d'Alene Nursery where seedlings are grown for replanting back in the park. This year (and last), we also sent seeds that will be genetically tested for blister rust resistance. This allows us

to know which 'plus' trees are truly resistant, rather than those that just appear to be."

Seed collection for rust resistant trees began in 1997, and in 2000 the first whitebark pine seedlings were planted. The success of these seedlings is critical to the survival of whitebark pine as monitoring efforts show a continual decline in the number of healthy whitebark trees in the park. Currently, 78% of remaining live trees are infected. Yet, research also shows that of the 6,400 whitebark seedlings planted between 2000 and 2007, 41% survived. To date, none of the surviving seedlings have shown signs of blister rust. With a new understanding of appropriate planting techniques, researchers are hopeful current survival rates will increase in the future.

Seeing the dead skeletons of whitebark pines scattered throughout this patch of blister rust infected trees, it seems the survival of this species is hanging on by a thread. I ask various members of the dedicated crew what chance they think these trees have. Heads shake, eyebrows raise. Most say it doesn't look good for the whitebark. When I ask about the impacts this will have on the surrounding landscape, all agree that an essential component will be lost. All agree that some impacts may not even yet be understood.

And still, I also notice the excitement in their voice over the trees that have survived. As one of the climbers cages his 100th cone on a particular 'plus' tree, the huddled recorders standing below smile, exclaim disbelief, and pass on words of encouragement. It may be that we've seen the last of these crooked relics, but hiking down from the windy slopes of Scenic Point I began to wonder...maybe these hardy trees could be saved. After all, a group of equally hardy individuals is looking out for them.



New Products from the Crown of the Continent Research and Learning Center

By Terry L. Peterson

In 2010, CCRLC created two informative and engaging brochures and three new resource bulletins. In addition, we published a 'rack card' describing who we are and what we do.



Rocky Point Nature Trail is an interpretative brochure describing the changing landscape in a recently burned area. The brochure explains how different species have evolved with and adapted to fire. 'Fire up' your enthusiasm to discover forest succession at work.

Grizzly Bears in the Northern Continental Divide Ecosystem is an educational brochure that relates information from a recently completed study determining bear population densities and trends in the Northern Conti

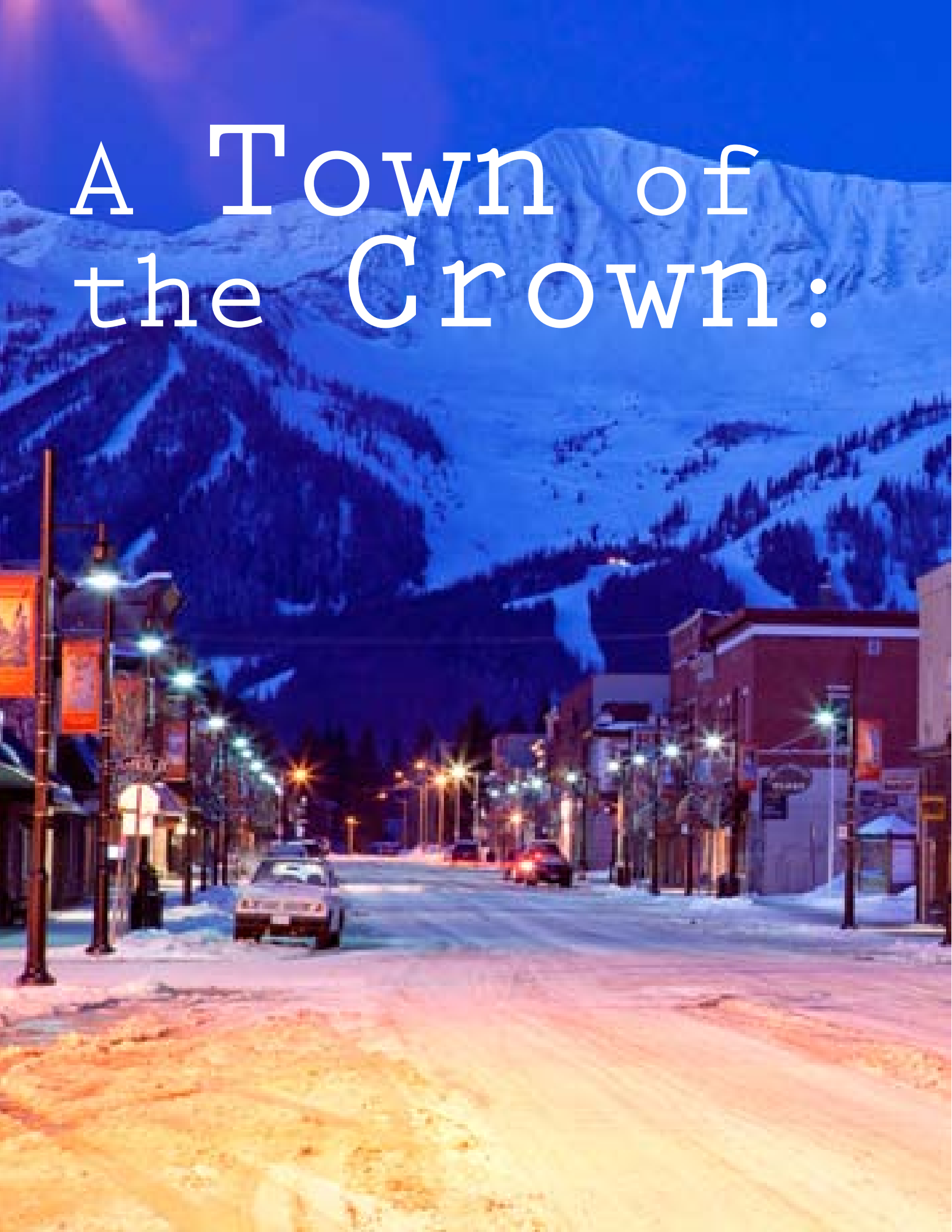
ental Divide Ecosystem. Read about delisting the grizzly, measuring "bear years," and other 'grizzly' topics in this publication.

Our new resource bulletins include North Fork Homesteads, Climate Change and the Pika and Aquatic Invasive Species. In the North Fork Valley, European homesteaders predated Glacier National Park and many remnants of those homesteads survive today. The North Fork Homesteads Resource Bulletin revisits the history of homesteading in the North Fork as well as recent research of these sites. Homesteads, as archeological sites, have drawn a number of investigators 'up the river,' and led to interesting and engaging findings.

Climate Change and the Pika describes recent research about the North American Pika and how the pika is likely to respond to climate change. Lastly, our Aquatic Invasive Species Resource Bulletin draws attention to some of the aquatic invasive species threatening the integrity of Glacier National Park. Historically, non-native fish were intentionally introduced for sport fisheries. Not only are these a concern but also other non-native species, both plant and animal, threaten our waterways. Read about how you can protect the park by recognizing these aquatic invasive species and stopping these 'invaders' from spreading.

To order these brochures or to see them on-line view Glacier National Park's Crown of the Continent's Learning Center website. Google Crown of the Continent Learning Center or call (406) 888-7800

A Town of the Crown:





Fernie, BC

A Book Review and Recommendation

Photo by Tourism Fernie

With this “Book Recommendation” we are beginning a new series in the *UM Crown of the Continent E-Magazine* that we’re calling “Towns in the Crown.” Sometimes, as in this case, it is our intention to focus on a book about a specific town that we can happily recommend to our readers as with the piece below on Fernie. *A Celebration of 100 Years*, published by the Fernie and District Historical Society in 2003. In other cases, we will write or commission profiles of some of the other important and fascinating “towns of the Crown,” both large and small. We hope that our readers will get to know things they didn’t already know about these towns and, perhaps, be inspired to visit them. So here’s a piece on our featured “Crown Town #1: Fernie, British Columbia.”

Why are we starting with Fernie, you may ask? Anyone who has been to Fernie knows that it is an exciting, picturesque Rocky Mountain town with a colorful history and a vibrant present. In many ways it could be described as a “typical” Crown of the Continent town, but in other ways, it is clearly unique. Additionally, those of us who reside on the south side of the Canadian-U.S. border are, with numerous exceptions, embarrassingly uninformed about places, issues, institutions, and opportunities on the north side of that border, even though a town like Fernie lies only two hours driving time from Kalispell, Montana. Enough reasons?

Fernie. A Celebration is a treasure trove of narrative historical pieces, historical photos, contemporary photos, interesting anecdotes, brief profiles of people and institutions, reflections on significant events and major trends. And that all adds up to a highly informative portrait of this attractive and very interesting Crown town. Although the general structure of the book is laid out essentially in chronological fashion, with each of the seven chapters (excepting chapter seven) focusing on a ten to twenty year chunk of time, stretching from 1904 to 2004. The seventh chapter, “Local Speak: A Year in the Life,” is built around a collection of one-line comments from Fernie residents about “how they got there” and “why they live there.” Like all the other chapters it, too, is richly illustrated with exceptional photographs that show the town and its surrounding areas in all their diversity and stunning attractiveness. This is, after all, part of the Crown of the Continent.

Like other Crown towns on both sides of the border in which we live or which we know well, Fernie’s history is

full of drama: rough characters, mining explosions, fires, floods, depression and economic “booms and busts,” the comings and goings of major corporations and railroads, the discovery and development of tourism, the influx of outsiders looking for a natural and healthy place to live, a strong sense of place and civic pride. Readers will learn about two major legends that have accompanied Fernie’s history, are well known by its residents, and have intrigued visitors over time: the *Legend of the Ghost Rider* and the *Legend of the Griz*. You’ll have to read the book or check out these legends and other information about Fernie on the town’s website at www.fernief.com. I won’t give them away here. But they are important for annual events and for place names that remind residents and visitors alike of the importance of stories, and of legends.

Chapter One, “1904-1913: Trial by Fire,” informatively illustrated by historic photos and contemporary ones, covers Fernie’s beginnings as a coal mining camp (Crow’s Nest Pass Coal Company Limited) and some of its early challenges, such as a major explosion at a Coal Creek mine in 1902 that killed 128 miners and the devastating fires that ravaged the town in 1904 and again in 1908. But it also provides insights into and information about the rugged and ethnically diverse residents who led colorful lives during this period, suffered but then rebuilt the town after each disaster, turned aspirations and hopes into reality, raised families, educated their young, published newspapers, played in their marvelous natural setting and on athletic fields and ice arenas (soccer, baseball, ice hockey) and welcomed the railroad (Canadian Pacific Railroad), traveling circuses, and (mostly) new comers.

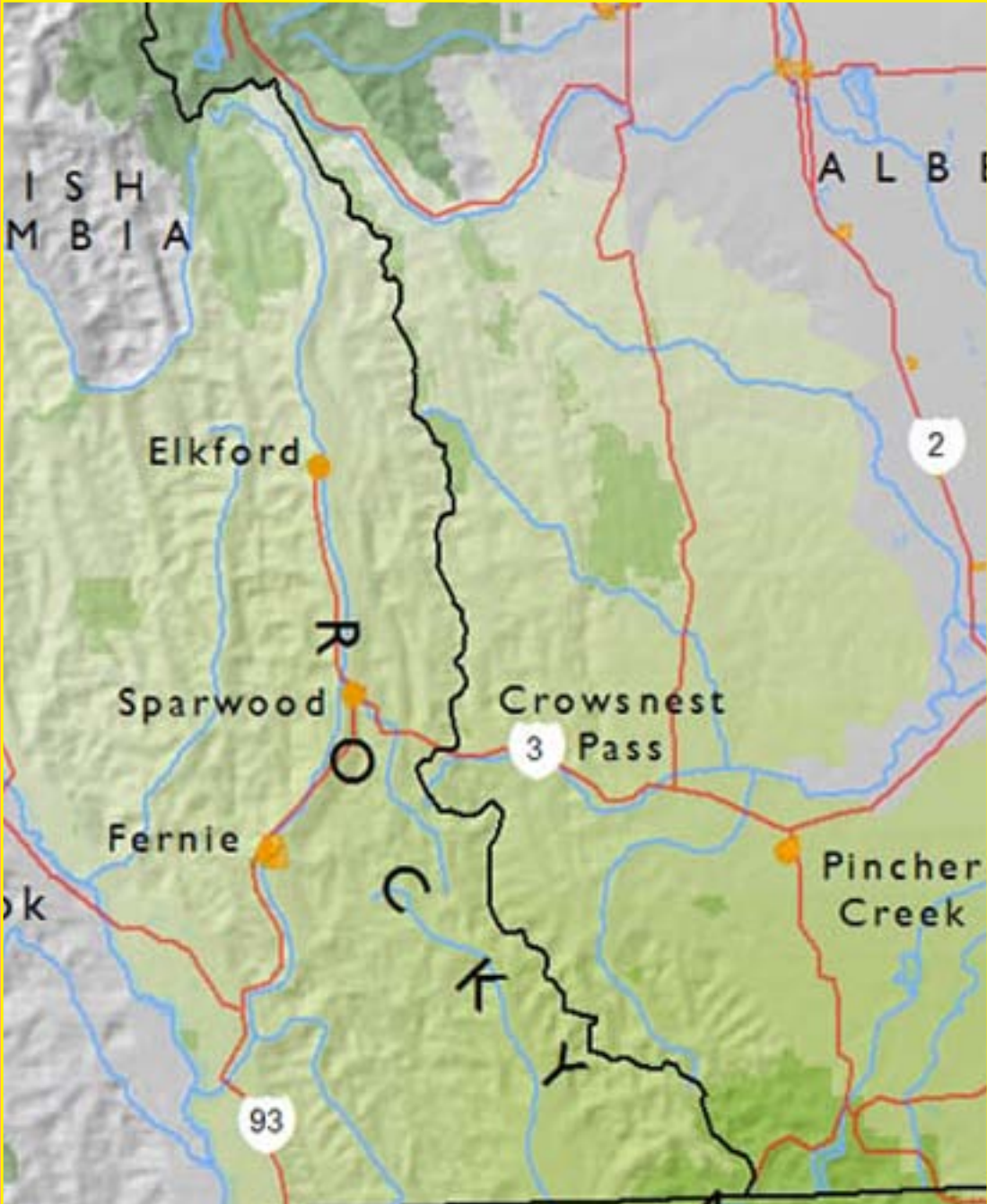
The second chapter, “1914-1938: War and Depression,” relates stories of various kinds of challenges as Fernie shed its almost exclusively “rough mining town” image and developed into a more permanent kind of town. For Ferneites and others who called Canada home, World War I began earlier than for U.S. citizens: since the war started for Britain already in 1914 (in contrast to 1917 for the U.S.), it also began in that year for Canadians. And some 92 men and boys from Fernie died in that war, a huge sacrifice for such a small town. This chapter provides information and insights, again through photos, anecdotes, and narrative, about and into the realities of prohibition, influenza outbreaks, the arrival of cars, mining strikes, the logging industry, the challenges of the 1929 crash and subsequent depression, rampant unemployment, and, once again, another big war. Like

WW I, World War II came earlier to Canadians than to citizens of the U.S., September 1939 as opposed to December 1941.

Chapter Three, “1939-1958: Winning the War but Losing Steam,” deals with the effects of that long war (1939-1945) for Canadians in and around Fernie, the slow but steady emergence from the depression, the growth of the town, the challenges of rough winters, and the modernizing of many aspects of life in these northern Rockies. This chapter is especially informative in presenting what one might call the fabric of “social history” in this feisty and creative small town, including, after the end

Chapter Four, “1959-1967: White at the End of the Tunnel,” informs the readers about the rather desperate economic situation that set in at the end of the 1950s with the closure of the Coal Creek mines, followed in 1964 by the withdrawal of the Canadian Pacific Railroad from Fernie. Even though the coal industry made a sort of comeback in the following years, it was clear to the town’s leaders that its economy had to diversify. And in this chapter we learn much about how

the “white” in its title, snow, that is, came to the rescue as Fernie became a skiing and winter recreation center. Although ultimately unsuccessful, Fernie even submitted a bid to host the Winter Olympics in 1968. It lost out to its bigger and better known neighbor Banff as Canada’s entry, which lost to Grenoble, France, for the games themselves. Nonetheless, as this chapter illustrates, Fernie became an up-and-coming outdoor recreation center and thereby added at least one stabilizing element to its theretofore rocky economic base.



Kaiser Aluminum plant which, even though it provided, in conjunction with the revival of the Crows Nest Pass Coal Company, economic growth and jobs, brought new social and infrastructure challenges with it. As we learn, the “boom and bust” cycle of mineral extraction industries in the region rattled Fernie as well during this period. Yet, the attractiveness of the region and Fernie itself for new residents continued during this period, and the town added substantially to its cultural, educational, recreational, and civic life.

The book’s fifth chapter, “1968-1994: Kaiser Boom,” deals primarily with the arrival of the

The final “regular” chapter of this book, “1995-2003: A New Wave—Locals by Choice,” focuses on the continuation of that demographic development as the lifestyle

and expansion of recreation opportunities for all seasons attracted more and more people. World-class skiing, hiking and climbing, biking and rafting, fishing and hunting, complemented by a vibrant cultural and social life, all played their roles in Fernie's more recent development and growth.

The seventh chapter, as suggested at the beginning of this review, is replete with contemporary photos of life in and around Fernie, and these are commented on, at least indirectly, by one-line statements from locals. Among my favorites are: "I am in Fernie because I was born here." "I was born in Fernie and love how I feel when I'm here." "I came to Fernie because I was told to." "I came to Fernie for snow and work and to learn how to cook Canadian." "I came to Fernie with a boy—wrong boy, right town." "I came to

Fernie because they wouldn't give me a job in Lethbridge." Whatever the reason these people came, stayed, or admittedly, in some cases, left—readers of this

wonderful book will find, as I did, a great deal to learn about this special town, its history, its people, and what it has to offer, especially, but not only, outdoors. They will also sense differences between a Canadian town in the Crown of the Continent and similar towns on the U.S. side of the Crown, and discover a plethora of great reasons for going there and seeing what it's all about for oneself. Happy travels to Fernie and the rest of Canada's amazing portion of "our" collective Crown of the Continent. I'm certainly planning my next trip there!

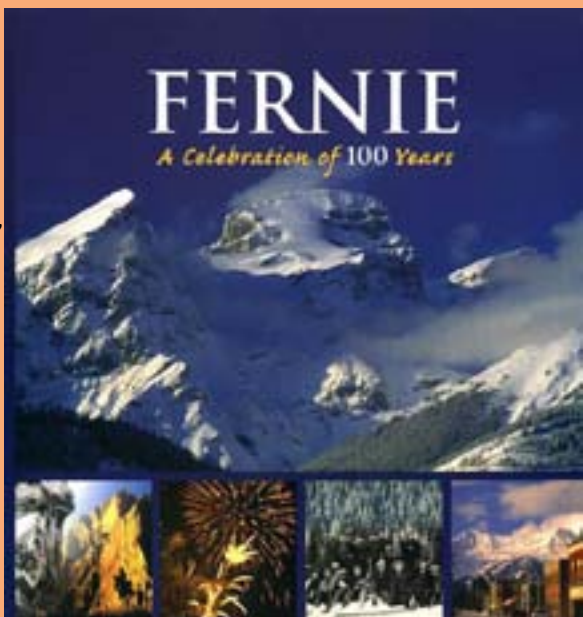
Jerry Fetz

The book may be purchased by e-mailing history@ferniemuseum.com. Cost is \$31CAN.

Facts about Fernie:

It is located in Southeast British Columbia, just West of the British Columbia/Alberta border. It, too, like Missoula, has a "river that runs through it," in its case the marvelous Elk River that runs north to south through town. At Fernie Coal Creek (guess why it's named that?) flows into the Elk River as well from the East. Canadian Highway 3, also called Crowsnest Highway, runs north-south through Fernie as well. Mt. Hosmer and Castle Mountain are two of the major peaks in view of the town, but Fernie is virtually surrounded by mountains. Fernie is home to a campus of the College of the Rockies (main campus in Cranbrook), its hockey club team is the Ghostriders, it hosts an annual Fernie Mountain Film Festival, and it is a destination for outdoor activities of all kinds. Fernie is accessible by car from Calgary in about 4 hours, from Cranbrook in 1, and from Kalispell in 2. And its history is both rich and colorful, as you read above.

Our "recommended book" this issue, *Fernie. A Celebration of 100 Years*, lists as its main author Jennifer Hamilton. Short, but important pieces were also contributed by members of the Historical Society staff, John Kinnear and Mike Pennock, with the final chapter compiled by Steve Short who also supplied the cover photo and the many contemporary photos of Fernie and the surrounding region. His photos constitute a major and wonderful feature of this book. The book, as the title suggests, was produced to commemorate the 100th Anniversary of the incorporation of Fernie (1904) and to provide readers with a fascinating and well-illustrated historical chronology of those 100 years.



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THANK YOU FOR VISITING OUR OFFICIAL WEBSITE of the University of Montana's Crown of the Continent initiative. This initiative grew out of discussions between the University and representatives of Glacier National Park initially, but has grown to become a collaborative effort involving an ever-expanding number of additional organizations, agencies, non-profits, and educational and research institutions on both sides of the U.S.-Canadian border.


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