

## Burning Questions

**IN BC'S WELLS GRAY PROVINCIAL PARK, NATURE IS FORCING WILDLIFE MANAGERS TO MAKE SOME DIFFICULT CHOICES**

**W**ells Gray Provincial Park, in south-central British Columbia, 400 kilometres northeast of Vancouver, is an embarrassment of wilderness superlatives. On the map, it is a great green blank spot large enough to encompass one in every five nations on earth. On the ground, it is two horizons worth of undisturbed forests, untravelled wetlands, unpolluted lakes, undammed rivers, and untamed waterfalls.

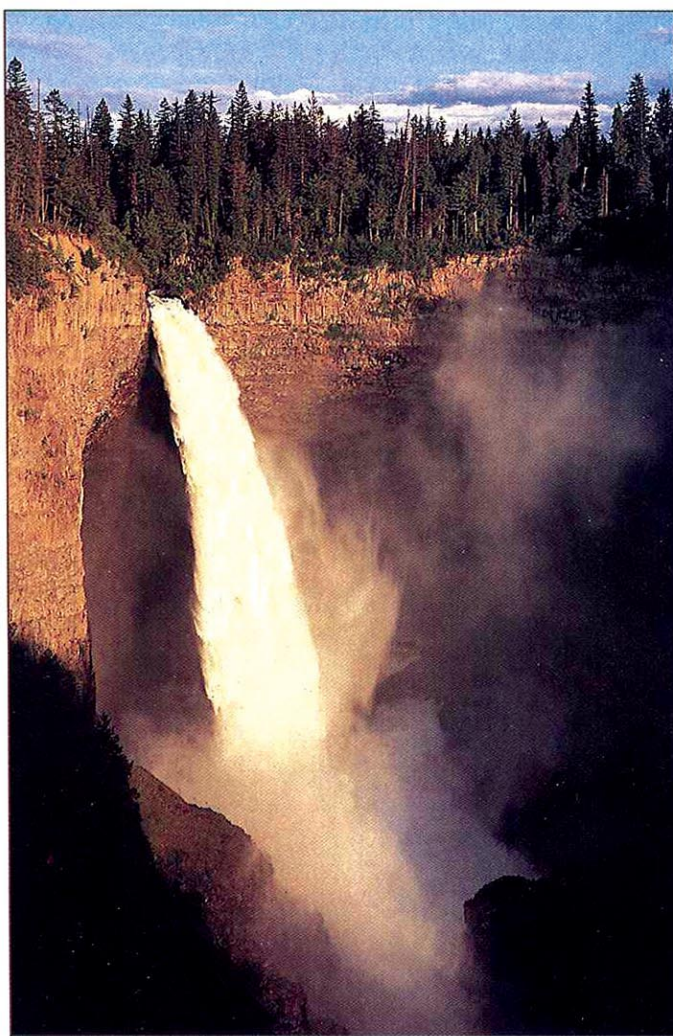
Except in the south, the park's boundaries are defined by the watersheds of rivers. Of these, the Azure and the Murtle are quite possibly the largest ones in North America to be contained entirely within a park. As for the Clearwater River, the park's main artery, where else at temperate latitudes can you slake your thirst with river water—a thousand cubic metres of it every second—essentially as clean today as it was 1000 years ago?

East and north, Wells Gray bristles with mountains. These are the Cariboo: a subset of the Columbia Mountains, and next-door neighbours to the Rockies. The Cariboo is a remote and ragged range into which no roads have ever been built, and no hiking trails routed. Instead there are only snowfields, cirques, glaciers, fell-fields, tarns, avalanche tracts, grizzly bears, mountain caribou, mountain goats, and sculpted mountain

summits to 2900 metres tall. Although the Cariboo occupies roughly 60 percent of the park area,

as any in inland Canada. Here a half million years of episodic eruption by a dozen different volcanoes has bequeathed the Clearwater Valley 25 cubic kilometres of lava.\* Nowadays this basaltic infilling takes the form of a gentle, forested, valley-bottom plateau. Several kilometres wide, the Murtle Plateau is as much as 150 metres thick.

This plateau is very much the crux, if not quite the heart, of Wells Gray. Without the canyons and waterfalls carved into it by glacial meltwaters 11,000 years ago, the Clearwater Valley might never have been set aside as a park. Nor probably would Wells Gray exist were it not for the hundreds of moose that congregate on the Murtle Plateau (and adjacent Green Mountain) every winter. And therein lies a dilemma for wildlife managers. In the beginning, there seem to have been no moose at all in the Clearwater Valley. When



T. GOWARD/HELMCKEN FALLS

they entertain less than 1 percent of its 100,000 visitors.

South and west, Wells Gray is much more forgiving—a region of elevated plateaux intersected by deep, steep-walled valleys. Cradled in the valleys, especially where Murtle River meets the Clearwater, is a cluster of “recent” volcanic activity as intense, and as varied,

Joseph Hunter, a surveyor for the Canadian Pacific Railway, first visited the area in 1877, he commented on its bountiful caribou, deer, and bear, but made no mention of moose. Nor, apparently, were they known in other portions of central British Columbia at that time. Only during the opening decades of the

\*See *Nature Canada*, fall 1989, pp. 36-43.



JIM FLYNN/MOOSE BROWSING

20th century did this animal the size of a horse become established here. Oldtimers in the Clearwater Valley tell us the year was 1923.

That year, according to survey records, the Clearwater Valley was cloaked mostly in conifer and deciduous trees: hardly a welcome

sight for an animal whose primary winter food is deciduous shrubs. ("Moose" is supposed to be an Algonquian word meaning "eater-of-twigs.") All that changed in July of 1926, when a wildfire swept up the lower and middle Clearwater Valley, burning everything in its

path. By the time the fire had burned itself out in late September, 540 kilometres of lowland forests had been reduced to blackened snags and logs and stumps.

The 1926 fire, though catastrophic in many ways, was a happy turn of events for the valley's newest (and browniest) resident. By 1930, in place of the forests that had stood before, the Murtle Plateau sported dense thickets of falsebox, red osier dogwood, thimbleberry, soopalallie, and especially, willow. It had become, in short, a moose's winter smorgasbord.

With a plenteous and dependable winter food source thus secured, the valley's moose flourished. By 1940, the Wells Gray herd had multiplied to more than 1000 animals. Not that they dined on valley-bottom browse all year long; during the summer months their appetites carried them upward 500 to 1000 metres to the rolling terrain of the adjacent highlands.

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T. GOWARD/TROPHY MEADOWS

Here, with their calves of the year, they munched on dripping aquatic plants uprooted from cool upland lakes and marshes. Only with the deepening snows of autumn and early winter did the moose straggle—reluctantly it would seem—downward to their wintering grounds.

Beginning in 1950, wildlife biologists arrived on the scene to study Wells Gray's moose herds in detail. Their assignment was to manage the moose as a "million dollar industry" for the benefit of hunters now converging in the hundreds on the park each autumn. The biologists were assiduous in their task. Over the next decade they tracked moose, tagged moose, counted moose droppings, performed autopsies on moose, evaluated moose parasites, weighed moose browse, and even sat out solitary vigils watching moose eat, timing every mouthful from dawn to dusk.

Out of these studies came the sober realization, by the early 1960s, that Wells Gray's moose each of which consumes up to 20 kilograms of browse every day were in danger of eating themselves out of existence. At winter densities of up to 20 animals per square kilometre, they were already consuming three-quarters of the previous summer's growth of willow shoots. If these animals continued to eat and multiply at going rates, their entire winter food supply might soon collapse, and the moose herd with it. Sound familiar?

By today's standards, the biologists' response to this quandary seems startling: they conducted a major advertising campaign calculated to attract even more moose hunters to Wells Gray. The park began to garner an international reputation as one of the finest hunting grounds in North America. And so, apparently, it was: in some years more than 300 moose were shot here.

But the net effect of the increased hunting was simply to forestall the inevitable decline of moose in Wells Gray. Though

hunting controlled the population, it had no effect whatever on the millions of saplings which, 30 years after the catastrophic fire, were now well established across the surface of the Murtle Plateau. Eventually the saplings—spruce, aspen, pine, birch, douglas-fir, and others—would overtower the shrubs on which the moose depended, and so begin to shade them out. Forest succession was now in its second phase, en route to a conifer climax which would certainly all but eliminate Wells Gray's erstwhile mascot.

Once again the biologists responded. This time they opted to set the regenerating forests on fire. From 1966 through 1971, 10 fires were successfully lit in the park, consuming a total of 1700 hectares. Two decades later, the burns these fires created still support thickets of willow and other browse species. As a result, they also support a moose population holding steady at about 800 animals for the time being.

Very soon, however, Wells Gray's moose will be ready for a renewed injection of willow. Once again young trees have established over what remains of the winter range, and once again winter moose browse is in decline. The prognosis is clear: either create new willow bushes, preferably by fire, or stand back and watch the park's moose herds dwindle. The question we should be asking is: "Does it really matter if they do?"

Wilderness can be defined as that part of a landscape that goes unsaid. It is also, or should be, that part of a landscape that goes unmanaged. Nowadays, however, no landscape anywhere is entirely immune to management decisions—so ubiquitous has the human touch become. Twenty or 30 years ago, the managers of wilderness parks behaved, in keeping with the times, as though parks were fundamentally for people. Their modern-day counterparts seem not so sure. Perhaps, after all, a

park is primarily for itself: a repository of natural diversity deserving to exist in its own right.

But what if allowing natural processes to run their course within a park threatens the very attributes that define a landscape as wilderness in the first place? What if *not* burning Wells Gray is likely to cost the park not only its moose, but also, in the long run, its moose-eating wolves?

Those who wander Wells Gray's trails every summer and paddle its lakes probably have other things than the long-term survival of moose and wolves on their minds. Knowing little of the park's past wildlife traditions and finding refreshment, here and now, in the sheer wildness it preserves, they perhaps feel less compelled than park managers to maintain those traditions into the future.

How, I wonder, do the park's moose feel? Listening to the low moan of wolf music drifting across the Murtle Plateau of a crisp March midnight, I think they must feel that wilderness, like a river, can never be the same twice.

TREVOR GOWARD

### How to get there

Wells Gray Provincial Park, 160 kilometres north of Kamloops on the Yellowhead Highway (Highway 5), is within a day's drive of Vancouver, Prince George, Calgary, and Edmonton. The primary entry points are at Clearwater, Blue River (hiking and canoeing only), and 100 Mile House.

Tent and RV camping are available at Dawson Falls, Clearwater Lake, and Mahood Lake. Walk-in camping and canoe-access camping are found at Murtle Lake—the largest lake in North America to be reserved exclusively for paddlers.

For information on trails, campgrounds, and other accommodations, write to B.C. Parks, Box 70, Clearwater, BC, VOE 1N0.