

CONSERVING NATURE IN THE PARKS

by R.Y. Edwards

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British Columbia is unique among the provinces. This is not a boast, but is simply recognition of the fact that this is Canada's mountain province. Because of its mountains, British Columbia has many climates. Long ranges reach high into climates very like the Arctic. The same mountains, acting as partial barriers to the winds moving eastward from the Pacific, create wet and dry area and a warm coastal strip.

When climates differ from place to place, so too does the plant and animal life. The result in British Columbia is rather startling to anyone familiar only with the plains and peneplains of America. In British Columbia one can walk in a single day from a dry valley among cactus and grease-wood chaparral where rattlesnakes lives in a near-desert, and by evening stand in a snowbank high in a mountain where there are ptarmigan and arctic willows and caribou, in country resembling arctic tundra. Again, one can stand on living glaciers where there are only ice worms and ravens feeding on insects fallen to the ice in the cold air, and look down on a coastline with a climate like the Mediterranean, where some winters there is no frost at all! This contrast of climates, and hence of living things, make British Columbia the delight of the tourist, the happy hunting ground of the nature lover, and an unusual outdoor laboratory for the scientist working to unravel the secrets of living things.

To help preserve parts of these many kinds of habitats, British Columbia has many parks. Some of them are small, some large, but in nearly all of them parts of the natural landscape are preserved so that people will always know (if they care to look) what British Columbia was like before the hand of man fell heavily upon its natural resources. Here are preserved forests and flowers, birds, mammals, insects -- an endless list of life -- and in the process of preserving them, wild and unmarred scenery is also saved. A few additional parks are dedicated to saving the works of Indians, and several places significant in the early history of white men that came to tame this last frontier to the west.

The parks in British Columbia -- 150 of them -- range in size from a few acres to those covering over a million and half acres. It will be possible here to mention only a few of these parks and their natural treasures.

Strathcona Park is a large area thrown across the mountains which form the backbone of Vancouver Island. At high elevations in winter snow piles to great heights, while the lowlands are covered with forests of huge conifers characteristic of the warm and wet parts of the Pacific Coast. Elk live in this park. When most of us think of elk we put them in a mental picture of open forests and margins of grasslands. In most place elk inhabit dry forests bordering grasslands too dry to grow trees. But in Strathcona Park a different kind of elk lives "in country where an elk shouldn't be". Far from being in open, dry habitat, these elk dwell in dark forests of cedar and hemlock where the growth may be the densest in temperate North America. It is our hope that herds of the Vancouver Island elk will always be able to roam the gloomy forest aisles in the valleys of Strathcona Park.

High in the mountains north of Vancouver lies Garibaldi Park, famous for its interesting geology, rare flora, and spectacular scenery. Perhaps the most celebrated area here is the Black Tusk Meadows, long flowered slopes that rise to a column of black rock, the remnants of an ancient volcano. The Black Tusk is a landmark, visible for miles about, that has become the symbol of Garibaldi Park. Nearby are snowy mountains and great, living glaciers pouring milky green water

into quiet lakes. Lava flows, cinder cones, and ice caves are also part of a fascinating outdoor textbook on geology concentrated about the meadows.

The meadows themselves are rich in showy plants, and above them in the rocks are the dwarfs of the plant world, hugging the ground for protection from the savage elements of the mountain heights. Here grow willows only a few inches high, tiny saxifrages, and mats of moss campion spread like velvet among the rocks. These meadows have been visited for decades by campers climbing laboriously from a valley thousands of feet below.

While parks are for people, people can destroy parks. This mountain vegetation must be preserved from trampling by visitors, for it is one of the most delicate vegetations in the world. A carefully planned program of conservation must prevent people from destroying the very thing that is attracting them to these high mountain meadows.

The Cascade Mountains penetrate into British Columbia only a short distance beyond our southern border, and end abruptly at the deep gorges of the Fraser River. These mountains, like the Coast Mountains to the north, are the first barrier to the air masses moving eastward from the warm Pacific. Consequently, the western slopes have temperatures warmed by the coast and are drenched by frequent rains. In contrast, the eastern slopes are relatively dry, for they lie in the "rain shadow" of the mountains. Manning Park lies across this transition of climates. Consequently this park constitutes a nature preserve invaluable to the naturalist and scientist, for with the abrupt change in climate there is a corresponding change in living things. For example, the wet side has Coast deer, a dark chipmunk, and the Douglas squirrel, similar to the red squirrel but different enough to be a distinct species; the dry side has mule deer, a brightly coloured chipmunk, and red squirrels similar to those found across the rest of Canada to the east. Since one of the major problems of natural science is the understanding of how living things are changed by environment, here is an outdoor laboratory of great value. It is easier to study such questions when one can walk in a few minutes from where a living thing flourishes to where the same living thing is unable to survive. This wonderful transition is preserved in Manning Park.

There are many other things in this park preserved so they may be enjoyed or studied, and hence used, by people. Outstanding among these are the alpine meadows of Three Brothers Mountain. In late July when these miles of meadows above the trees are in full flower, the show must be seen to be believed. Here is a riot of colour, with the reds of paintbrushes, the gold of Arnica, the blue of lupine, the mauve of Asters, with white and yellow from many species, all in a setting of lush green herbage. This display of natural gardens begins even before the snow is gone, for the retreating edges of snow patches in June are decorated with white anemones and yellow snow lilies. All this spectacle of lavish life is set in a place surrounded by space. In the meadows the feeling is of being on the top of the world, for in every direction the eye looks into miles and miles of hills and mountains that become dimmer and dimmer in the haze of distance. The alpine meadows are an inspiration to most people who know them, yet few people (even those living in British Columbia) have seen this wonder that is found only in high places in the mountains. Manning Park ensures that a unique meadow area will be available, always, to people, and soon they will be able to glimpse it from their cars.

Well to the north of Manning Park is Tweedsmuir Park, again a large, wild area in mountains between the dry interior and the sea. This is "Indian country", partly because it is salmon country where in season the rivers teem with fish leaving the rich sea to spawn in the shallows of cold mountain streams. The Indians here are Bella Coolas and Chilcotins. They still follow ancient trails in the autumn to traditional camping grounds by the rivers, where the air becomes heavy with the smell of alder smoke mixed with the sharp odour of fish. Racks heavy with the red flesh curing

in smoke, to be saved as winter food. The Indians are not alone as they act out the prehistoric past at the salmon streams. Grizzly bears concentrate about the teeming waters, feeding on the fish and storing this rich food for winter as fat in their bodies. The grizzly was once kind of the mountains and adjacent plains from the highlands of Mexico to the Arctic Ocean. Today only a few survive south of Canada. The retreat of "grizzly territory" northward is continuing today in Canada. Tweedsmuir and several other large parks in British Columbia may one day be the last stronghold of the grizzly, one of the most magnificent forms of life this earth has ever produced.

Another unusual species at home in Tweedsmuir Park is the mountain caribou. These large reindeer (yes, caribou are reindeer) require large areas of undisturbed country for survival. Roads, railways, settlements, grazing by sheep, cattle, or horses, and forest removal, have all been shown to doom these animals. Caribou are plentiful in this park, and occur in other large parks. When most of British Columbia has been tamed by man, these few parks, if properly managed, will be the last stronghold of an animal with no equal in its ability to flourish on some of the coldest barrens in the world.

Wells Gray Park is an area unique for its variety of wildlife, but it has other attractions. Cinder cones, lava flows, glaciers, mineral springs, and high waterfalls add to the attractions of a million and a half acres of broad valleys, high mountains, large lakes, dense forests, and meadows above the dwarfed trees of timberline. Here in the Columbia Mountains, just west of the famous Rocky Mountain Trench, favourable combinations of weather, soil, and vegetation result in a unique variety of life. Canada geese nest by quiet mountain lakes, and golden eagles soar along the rims of high mountains. Over 200 species of birds have been recorded from this park.

This place of life in rich variety is most famous for its many kinds of mammals. Moose are common. Caribou range through meadow and forest. Mountain goats, preferring nearly vertical landscapes, live in the more rugged terrain. Grizzly bears hunt hoary marmots and Columbian ground squirrels at high elevations while mule deer and black bears populate the lowlands. The fur bearers, many of them now rare or exterminated over much of America, are here in variety and abundance. The observant wilderness traveler may see beaver, muskrat, fisher, marten, wolverine, mink, otter, two kinds of weasel, and lynx. One day Wells Gray Park may be an essential preserve for some of these animals. Today it is an essential preserve for the most famous mammal of them all: the wolf. Much of British Columbia is still wild land, but even in the wildest areas the airplane and new poisons of frightening efficiency have placed the wolf at the mercy of man. Perhaps this is as it should be, or perhaps it is not -- we will not debate the question here -- but we will defend the right of the "grey ghost wolf" to sanctuaries somewhere. Who is man to doom any species! Wells Gray Park today is a wolf sanctuary, and to the best ability of the staff in the park, a close watch is kept over their numbers.

For ten years in Wells Gray Park there has been a special program of wildlife research. This is an undertaking unique in Canada, with a biologist living in the park the year round. The result has been the opportunity to conduct research winter and summer in an area relatively small when compared with the areas usually studied by resident wildlife biologists. Most research has been on moose. Studies have investigated their food, diseases, reproduction, behaviour, and length of life. Over 100 moose have been trapped, tagged, and released, and almost as many more have been captured in other ways. Additional major studies have dealt with mountain caribou, marten, mink, wolves, willows, false box (an evergreen shrub), and lichens of the genus *Alectoria*, the so-called "beard mosses" that festoon the trees in some forests. The plants were objects of study mainly because they are important foods of moose or caribou.

Research programs such as this are essential to conservation. If conservation is wise use of land and/or living things on land, one must have facts in order to be wise. Only research can give reliable facts on natural resources. The lessons learned in Wells Gray Park have helped in the management of the park, they have helped throughout the province, in several other provinces, and in a number of countries around the world.

Our brief survey has touched on only five parks in British Columbia. These and all parks in British Columbia have two main purposes: first to preserve small bits of British Columbia in a natural state, and second to provide enjoyment for people. The emphasis on one or the other of these objectives varies from park to park, but even in those most thoroughly dedicated to people some aspects of nature are being preserved. There are, of course, other ways to practice conservation than to create and protect parks. But parks are an essential part of the conservation picture. One important aspect of conservation is that wild lands, and the wild things living there, can be enjoyed by people. If conservation is wise use, this is one example of land wisely used.

Flowers near timberline, Tweedsmuir Park

Provincial Parks (map)

White rhododendron. A mountain shrub.

Helmcken Falls, Wells Gray Park, is one of the highest falls in British Columbia, and one of the most spectacular. It has a free fall of 461 feet.

Bull caribou in the autumn with polished antlers and white neck.

Bull moose with antlers grown to show some palmation.

Skiers return at sunset in Garibaldi Park.

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