



O'Hara '91

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A Hikers' Guide to Oesa's Glacial Past

All the trails at O'Hara are laced with the legacy of the massive glaciers that penetrated the area between 3 million and 12,000 years ago. But nowhere is this glacial track record better exposed than on the trail to Lake Oesa. The name itself, Stoney for 'locked in ice', evokes its ice-filled past.

As you hike up the switchbacks, you are climbing one of the three headwalls in the Oesa valley. The walls are layers of hard rock that did not wear away as the glaciers carved the valley. Softer rock was ground away easily to create the three small lakes below Oesa: Yukness, Victoria and Lefroy. These are called paternoster lakes or beaded lakes, strung along the watercourse like beads on a string.

As the ice flowed down the valley, it plucked tons of rock and carried it along. As the glaciers retreated they left behind piles of rocky debris or till called moraines. The creek that feeds Yukness Lake, the first small lake you see, disappears into the porous moraine to cascade mysteriously over the headwall as Seven Veils falls.

All O'Hara's lakes owe their colour to the glaciers. The blue-green colours come from tiny particles of rock suspended in the water. Like sandpaper over a piece of wood, rocks carried in the glacier scratch along the rocks underneath and are ground into a very fine powder. This rock flour or glacial silt is finer than talcum powder, so light that it hangs suspended in the lakes. It is just the right size to reflect the shorter wavelengths of light - blue and green. When there is just a little silt in the water, the colour is a dark blue. As the amount of silt increases, the colour becomes greener and cloudier. If you come to Oesa just after the ice melts, usually in June, the lake is a clear, deep blue-green, as most of the silt has settled during the winter.

Before the descent to Lake Oesa, look back towards Lake O'Hara. You are in a hanging valley. The thicker mass of ice that filled Lake O'Hara eroded deeper and faster than the smaller tributary glacier, leaving the valley in which Oesa lies suspended high above. Now look up and see the

hanging glaciers on the mountain peaks. Some 200 to 300 feet thick, they are still actively carving and shaping the land before you. On a hot summer's day, huge blocks of ice, some bigger than a house, tumble off Mt. Odaray to the west.

Facing Oesa again, notice the steep-walled cirque that is in the process of being carved out by the glacier nestled at the head of the valley. Up to your right are the glacially scoured walls of Yukness. Yukness is a perfect arete honed by two glaciers working away back to back. Now glance around you; many of the prominent peaks in the area have a classic horn shape, chiseled by glaciers on three sides to a fine, pointed shape.

By now you may be feeling yet another effect of the glaciers. The cold ice cools the air above it, which then flows down, creating that wind that constantly blows off the glacier.

As as you travel around O'Hara keep an eye out for the many glacial features formed by the interaction of rock and ice. This is a young landscape, and still changing.

Wild Places - What For?

Wilderness preservation and the environment have become popular causes in the past decade. Many groups have taken up the cause of 'saving' undisturbed, pristine areas. In 1987, the Brundtland Commission recommended that every nation in the world protect at least 12% of its land from development. More recently, World Wildlife Fund Canada, the Canadian Parks and Wilderness Association, Canadian

Nature Federation and even the Canadian Chamber of Commerce have endorsed the call to set aside and protect 12% of Canada by the end of the 1990s.

But even if this goal is met, and parks and wilderness areas are saved from industrial development and resource exploitation, these areas may still be threatened - by those of us who visit protected lands to celebrate them. Even "non-consumptive" uses, it seems,

can unbalance natural ecosystems whose complexities we are just beginning to understand.

When hikers venture into a formerly remote alpine valley, that valley is changed. The trail we build to allow us to view the wildlife may lead to their disappearance, if it results in too much disturbance.

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Superintendent's Message

Welcome again! I am writing this on December 17th in time for the press. It is snowing hard in Field.

Those of us that have the privilege to work for the Canadian Parks Service find we are in a world with rapidly changing expectations of National Park's role in the overall conservation of our planet's biosphere.

Ten years ago we would talk in visionary ways about the role National Parks should play and would play in the future. Parks as the centre of studying intact ecosystems, Parks as genetic reservoirs, Parks as models for human activities in harmony with the rest of nature on a sustainable basis.

In a few short years, society has overtaken us and we are now immersed in planning our futures as leaders in environmental management.

To visitors returning to O'Hara, this may seem like old hat but the difference is that many of the concepts and management actions you have supported are now no longer leading the way with the threat of drastic change, but examples of doing it right.

Keep up your support!



Ian Church
Superintendent

YOHO NATIONAL PARK

(Wild Places...continued from page 1)

At O'Hara mountain goats depend on specific areas for feeding, resting and giving birth. They live on a delicate annual balance: any animal that wants to survive the alpine winter cannot afford to lose feeding time, or waste energy, during the short mountain summer. We can always choose to go elsewhere, while wildlife may not have that choice.

The trail system at O'Hara is extensive, but many quiet places and hanging valleys remain free from trail development, giving goats and other wildlife the

seclusion they need. After a century of recreational use, mountain goats still thrive at O'Hara, often wandering within sight of trails. Here we can see these majestic beasts in their natural state and leave feeling enriched by the experience.

If we are going to protect ecologically viable examples of all Canada's natural environments it is important that we also ensure that our recreational demands do not undo the good. Lake O'Hara may be a model to keep in mind as Canadians start to build a new good relationship with the earth we share.

O'Hara's River

The grey Kicking Horse River and its sunblasted, flower-strewn floodplain seem a million miles away from the green meadows and forests of Lake O'Hara. But stand a moment and listen: the wind is full of the rumour of running water.

Springs, rills, cascades and streams - everywhere O'Hara's landscape is alive with the laughter of living waters. At length they gather themselves up in Cataract Brook, or percolate into hidden streams beneath the forest, and hurry down to where the silt-grey Kicking Horse waits to sweep them into its flow and carry them off to the sea.

What is a river, really? And what does it mean when we assign the title "Canadian Heritage River" to the Kicking Horse - the only stream so designated in all of B.C. (and only the portion of it in Yoho National Park, as B.C. does not recognize the Heritage River program)?

If a river is only running water, then any gutter will do. A river, however, is far more than water: it is a living system - a complex of sand and gravel, floodplain and watershed, plants and animals, people and history and, of course, the running water that is the river's heart.

When we strip the timber from the highlands, the river changes as a result of more erosion and faster spring runoff. If we dam or channel a river, the entire system has to adjust to changes in flow and sediment load. When we pollute it, we sicken its aquatic life and cheapen the lives of those who live beside it. Everything in the landscape is in some way linked to the river because the river shapes, and is

shaped by, everything in its watershed.

In fact, one could say that the mountains are merely a part of the river that hasn't yet begun to flow. And when spring freshets bring boulders crashing down swollen tributaries, even that could be questioned!

Stored in the winter snows, released slowly during the cool high-country Spring, trapped in spongy alpine meadows and larch-fringed tarns, sustaining trees and moss and mosquitoes and marmots during their leisurely journey from the summits to the Kicking Horse, the newborn waters of the Lake O'Hara area are the very headwaters of one of Canada's great heritage rivers.

However the Kicking Horse may change as it courses through the wide valleys of Yoho National Park, pours over Wapta Falls and tumbles down the Kicking Horse Canyon to merge with the Columbia, there is always a part of it that belongs to Lake O'Hara. Few other Canadian rivers can boast such beautiful, well-loved, and carefully protected headwaters.

What a nation we would be, however, if all our rivers could!

The Canadian Heritage Rivers program, in the recognition and public awareness it brings to selected Canadian rivers, offers hope for this long-term ideal. This national program is now supported by every territory and province except British Columbia and Alberta. For more information on Canadian Heritage Rivers, contact the Superintendent, Yoho National Park.

Elizabeth Parker



Elizabeth Parker

Whyte Museum of
the Canadian Rockies

The early days of mountaineering in the Canadian Rockies must have been immensely exciting. Imagine the feelings of those climbers when

they reached the summit of a previously unclimbed peak or were the first to set eyes on a pristine alpine meadow.

But among the true visionaries was a woman who never climbed a mountain higher than timberline, who described herself as one of that "unknown company which scales rock and cuts the ice-stairway in imagination only." This was the woman who devoted much of her life to the founding of a national alpine climbing club.

Elizabeth Parker was born and raised in Nova Scotia. She settled in Winnipeg where for nearly four decades she wrote a literary column for the Manitoba Free Press. In 1904, suffering from poor health, she moved to Banff to take advantage of the hot springs. She fell in love with the Rockies and the love proved deep and lasting.

In 1905 reviewing his book, *The Selkirk Range*, she gave famous surveyor, Arthur O. Wheeler, a pen-lashing that he

never forgot. Elizabeth chastised Wheeler for a lack of patriotism in suggesting the establishing of a Canadian branch of a proposed North American Alpine Club. She believed that the first ascents of the Canadian Rockies should be held by Canadians, not Americans or Englishmen.

This attack set the wheels in motion for the collaboration of two kindred spirits. Together, Parker and Wheeler battled apathy and lukewarm enthusiasm to found what is known today as the Alpine Club of Canada.

Elizabeth's staunch support and hard work was rewarded in 1931 when the ACC named their hut at Lake O'Hara after her. The Elizabeth Parker Hut stands today, in a beautiful subalpine meadow in the mountains she loved, as a monument to a woman who braved the skepticism of a young country and believed in her own national dream.

Fish in the West

The National Parks Act states that "the National Parks shall be maintained and made use of so as to leave them unimpaired for the enjoyment of future generations." Yoho's history suggests we haven't always achieved this. Mining and timber operations existed within the park until 1952 and 1968 respectively. And another type of resource extraction continues in Yoho today: sport fishing.

It can be argued that sport fishing is not really resource extraction for anglers who use 'catch and release' techniques. By using barbless, single hooks these anglers land a fish, remove the hook and release the fish again without killing very many. But catch and release anglers are still in the minority, and there are questions about whether this sort of activity isn't harassment, which is also against national park regulations and contrary to an ethical relationship with living things.

The biggest problems facing Yoho's fisheries now are not the result of modern angling but rather the legacy of past practices. In the past, the Parks Service catered to the fishing fraternity by

stocking lakes, streams and rivers with trout.

Brook trout from eastern Canada and cutthroats from Yellowstone were introduced into Wapta Lake by the thousands between 1917 and 1975. As many as twenty-five rainbow trout — of non-native strains — were stocked in Lake O'Hara yearly from 1926 to 1957. These 'exotics' out-competed native fishes or cross-bred with them. They preyed on underwater life, disrupted whole ecosystems and permanently changed some.

This might not seem like a serious problem (at least not from the fishermen's point of view!) but the native fishes and other aquatic life of Yoho are integral components of the complex ecosystems of which we are stewards. We cannot just write them off.

Yoho stopped stocking fish in 1975. The problem now is "How can we recreate a natural system?" We might poison lakes or streams to kill all the exotics, and then re-introduce the indigenous species after the toxicity of the water has dissipated. But this would probably just add another layer of damage to already damaged ecosystems.

More likely alternatives include selective netting or increased harvesting of non-native fishes. This might mean that the season at Emerald Lake would be extended and the catch limit increased for exotic species, such as rainbows and brook trout, while being reduced to zero for the indigenous cutthroat and Dolly Varden. In lakes where fish never occurred naturally — including many around O'Hara — the goal may well be to eliminate trout and let the lakes' natural invertebrate faunas recover.

Further study is required to determine if and where native trout stocks still survive. Mistakes made in the past will not correct themselves, and the longer we wait the less likely will be our success.

If you are planning to fish in the park in the seasons to come your cooperation is essential. Fishing regulations may change as we begin working towards restoring Yoho's aquatic ecosystems; please check when you purchase your park fishing permit. If you have questions or suggestions please pass them on to the Superintendent, Yoho National Park.

Porkies at Timberline

When the larches have shed their needles and the cascades begin to harden into blue ice-cliffs, the trails of Lake O'Hara lie empty beneath a wintry sky. But scattered in ones and twos through the timberline forests of larch and fir, dozens of porcupines shuffle unconcernedly towards winter. They pause to sample the resinous inner wood of subalpine fir or the new growth of willow twigs before moving on, leaving their solitary little tractor-trails in the snow behind them.

In mid-winter, there is little to eat in the high country. Snow covers grasses and shrubs; insect life is dormant. Large animals like moose, elk, deer and mountain goat have retreated to winter ranges where snow is shallower. Most birds have left the country. Bears are asleep, dreaming of greener times.

The only medium-sized herbivore that can eke a living out winter up here is the porcupine. Why? Because it eats tree bark and buds that are exposed above the snow.

Mapping the distribution of observations of various mammals in winter has revealed an unexpect-

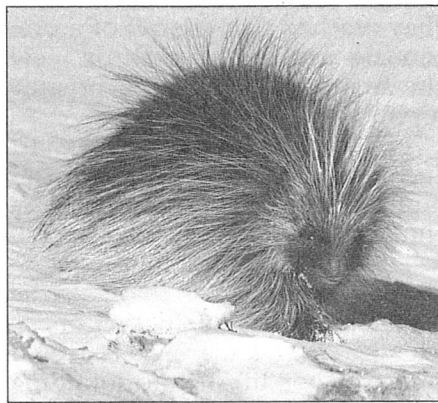


Photo: Patricia Halligan-Baker

ed relationship. Concentrations of porcupines overlap almost exactly with concentrations of wolverine. And the O'Hara area is noted for both species.

Could it be that the availability of porcupines in winter is a critical element of wolverine ecology? If there were fewer porcupines in the high country, what would be the fate of the western wolverine, a species that has been designated vulnerable by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC)?

Traditionally, porcupines have

been considered more as a nuisance than a vital part of the mountain ecosystem. Porcupines love the taste of salt, as well as the adhesive used in plywood. In the 1970s, plywood outhouses were quickly and thoroughly ventilated by porcupines, and many an axe handle and hiking boot has fallen victim to this large rodent's incisors.

One old-time warden in Jasper National Park shot 14 porcupines in one night, as they took turns chewing on his cabin door. Like wolves and packrats, they were considered destructive, undesirable pests.

But the porcupine has only one young each year. Such a low reproduction rate means their numbers recover slowly from destruction.

In Yoho National Park we are learning to store sweat-stained gear out of the reach of porcupines, and to substitute fibreglass or other materials for plywood in backcountry structures. Those who use the high country are coming to recognize that it is more sensitive, and more ethical, to protect the porcupine from people, rather than to protect our structures and facilities from the porcupine.

Trails Bulletin

Trail crew this year will work on the braided section of trail along the Odaray plateau. We also have a small reroute along *All Souls Prospect* to get around the short scramble. The Duchesney and Cathedral basins need some work to rehabilitate the wet areas. This may involve some reroutes through drier areas. There will also be several other projects involving mini-bridges and other structures that are in need of repair. We will continue the gravel hauling program in 1991 along the lakeshore filling in the low spots that are continually being flooded during the early summer.

Annual Meeting

The 1991 Annual Meeting of the Lake O'Hara Trails Club will be held at Le Relais at 8:30 p.m. on Monday, July 15th.

Recycling Encouraged At Lake O'Hara

Concern for the environment at Lake O'Hara is not limited to the immediate vicinity. Recycling programs have been run by the Lake O'Hara Lodge and the Lake O'Hara Trails Club for two years now. Bottles, cans, tin, cardboard, paper and waste oil are being recycled through depots in Yoho Park and Banff. Lake O'Hara Lodge has also stopped sending Christmas cards as a step towards curbing the unnecessary use of paper. In lieu of sending cards the Lodge now makes an annual donation to the World Wildlife Fund.

With Ian Church, the superintendent of Yoho National Park as the chairman of the Green Plan Committee for the Canadian Parks Service Western Region, it is hoped that recycling in Yoho and at Lake O'Hara will become more comprehensive and efficient in years to come.

How can you help? A donation to the Lake O'Hara Trails Club will help further the cause of recycling at Lake O'Hara.

List of Publications Available At Le Relais

Tommy and Lawrence - \$6.00

The Ways and Trails of Lake O'Hara
by Jon Whyte

History of Lake O'Hara - \$6.00

by Lillian Gest

The Magic of Lake O'Hara - \$7.50

a trail guide by Don Beers

The Lake O'Hara Trail Map - \$3.00

by Dr. George K. K. Link

Trail Guide to Lake O'Hara - \$2.00

a trail map

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