BEAUTIFUL BRITISH COLUMBIA MAGAZINE

4 Editor's Notes — Volume 31 • No. 3

5 **The Dr. Sun Yat-sen Garden**
China gave Vancouver its best — 'one of the highest peaks of sensitivity that man has reached.'

10 **The Return of the 'Great Glacier'**
Once this 'silent greatness' helped to pay the bills for the construction of the CPR.

16 **A Fair with Heart**
Comox Valley has the kind of country exhibition where spooked bulls once stampeded through the wall of a barn, and where you blow dry the chickens.

22 **Salmon on the Run to Birth and Death**
Every four years the sockeye swarm the Adams River, and everyone and everything is out to get them.

28 **A Tweedsmuir Moment: A Shriek, a Stampede, then Deep Silence**
In this largest of provincial parks, riders into the wild face fear and exultation.

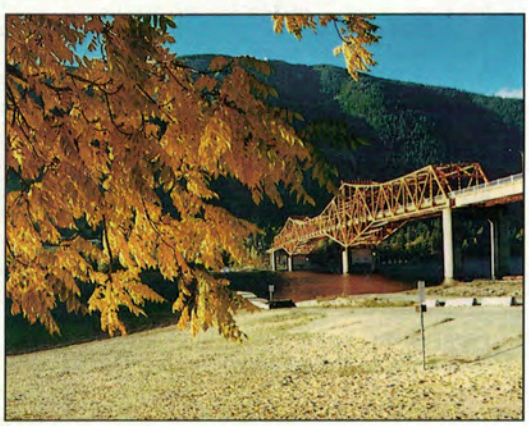
38 **Nelson the Heritage Capital: It Looks Up to its Past**
'A streetscape atmosphere that psyches people.'

5

10

22

28

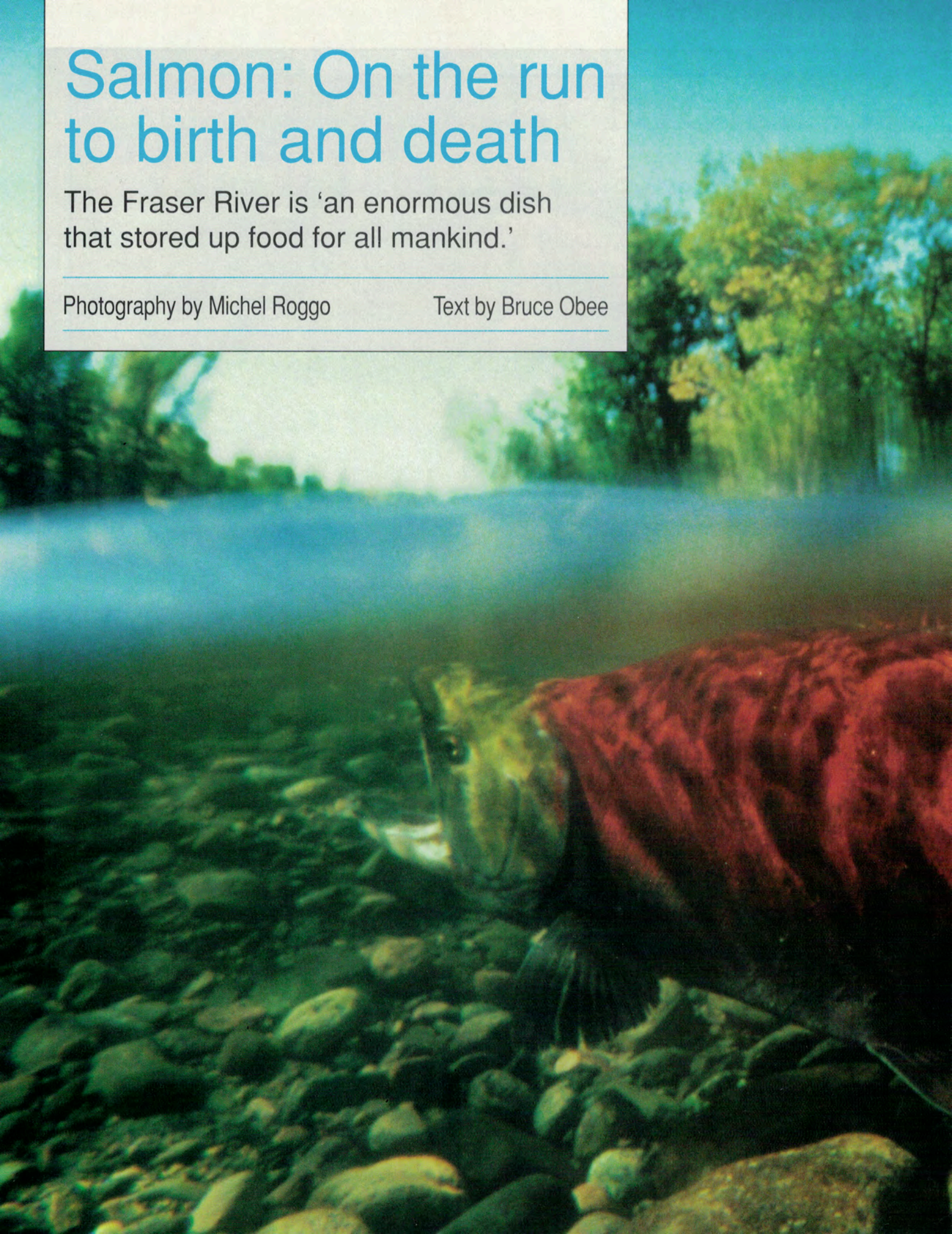

38

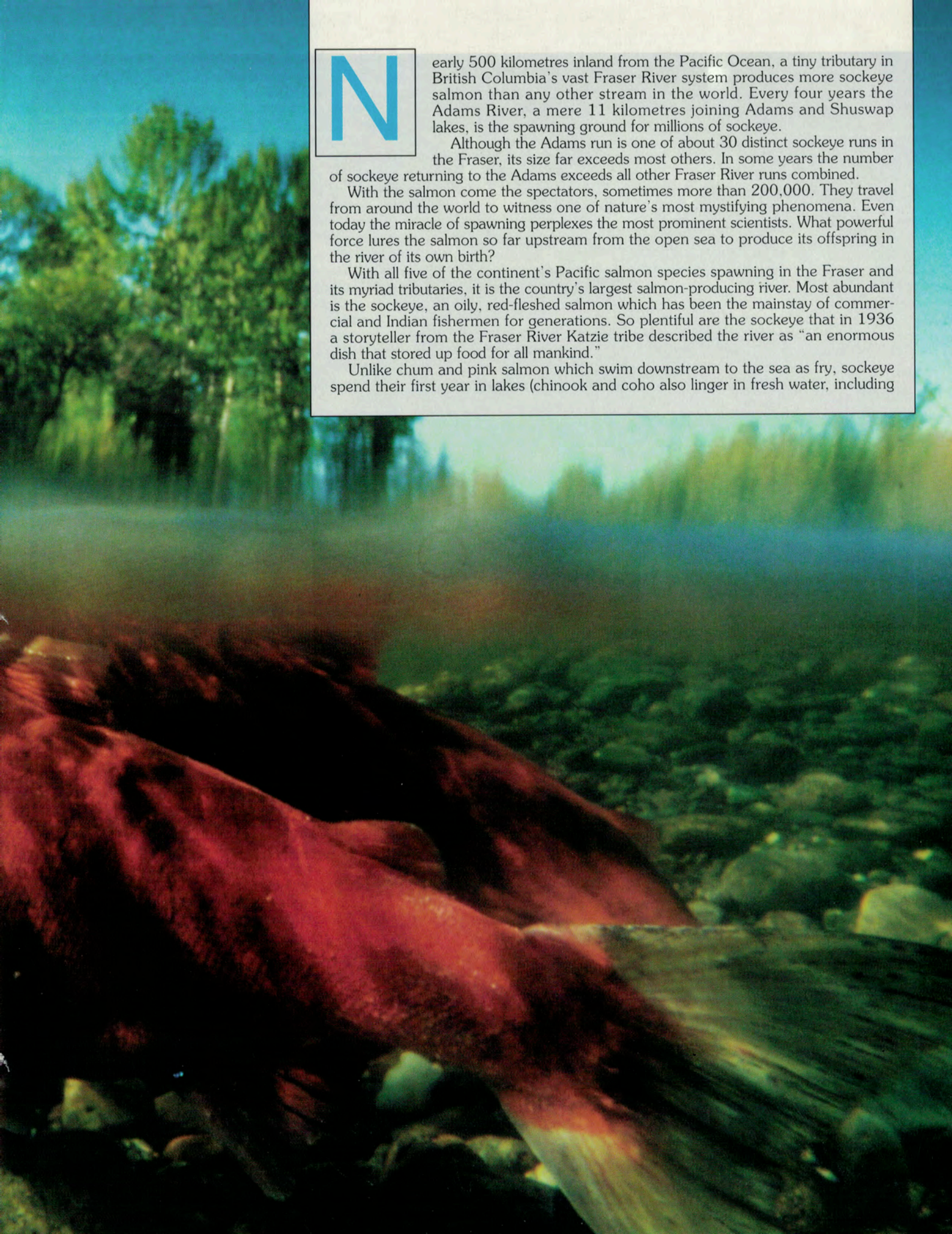
Salmon: On the run to birth and death

The Fraser River is 'an enormous dish that stored up food for all mankind.'

Photography by Michel Roggo

Text by Bruce Obee





Nearly 500 kilometres inland from the Pacific Ocean, a tiny tributary in British Columbia's vast Fraser River system produces more sockeye salmon than any other stream in the world. Every four years the Adams River, a mere 11 kilometres joining Adams and Shuswap lakes, is the spawning ground for millions of sockeye.

Although the Adams run is one of about 30 distinct sockeye runs in the Fraser, its size far exceeds most others. In some years the number of sockeye returning to the Adams exceeds all other Fraser River runs combined.

With the salmon come the spectators, sometimes more than 200,000. They travel from around the world to witness one of nature's most mystifying phenomena. Even today the miracle of spawning perplexes the most prominent scientists. What powerful force lures the salmon so far upstream from the open sea to produce its offspring in the river of its own birth?

With all five of the continent's Pacific salmon species spawning in the Fraser and its myriad tributaries, it is the country's largest salmon-producing river. Most abundant is the sockeye, an oily, red-fleshed salmon which has been the mainstay of commercial and Indian fishermen for generations. So plentiful are the sockeye that in 1936 a storyteller from the Fraser River Katzie tribe described the river as "an enormous dish that stored up food for all mankind."

Unlike chum and pink salmon which swim downstream to the sea as fry, sockeye spend their first year in lakes (chinook and coho also linger in fresh water, including

rivers). After a year they migrate downstream and usually roam the seas for two years before returning to spawn. So in rivers like the Adams, every fourth year is a peak year, and though some fish return in the intervening years, the runs are much smaller.

The Fraser system, with some of the province's largest lakes, is a sockeye salmon's dream. On the lower reaches young sockeye are reared in lakes such as Pitt, Harrison, and Lillooet. Upstream, some sockeye, including the Adams River run, swim east up the Thompson River through Kamloops, Adams, Barriere, Shuswap and Mabel lakes. Beyond the Thompson they swim up the Chilcotin River to Chilko and Taseko lakes, or to the lakes on the Quesnel and Bowron river systems. Some sockeye journey well over 1,000 kilometres into the big lakes of the Nechako Plateau — Francois, Fraser, Stuart, Trembleur, and Takla lakes.

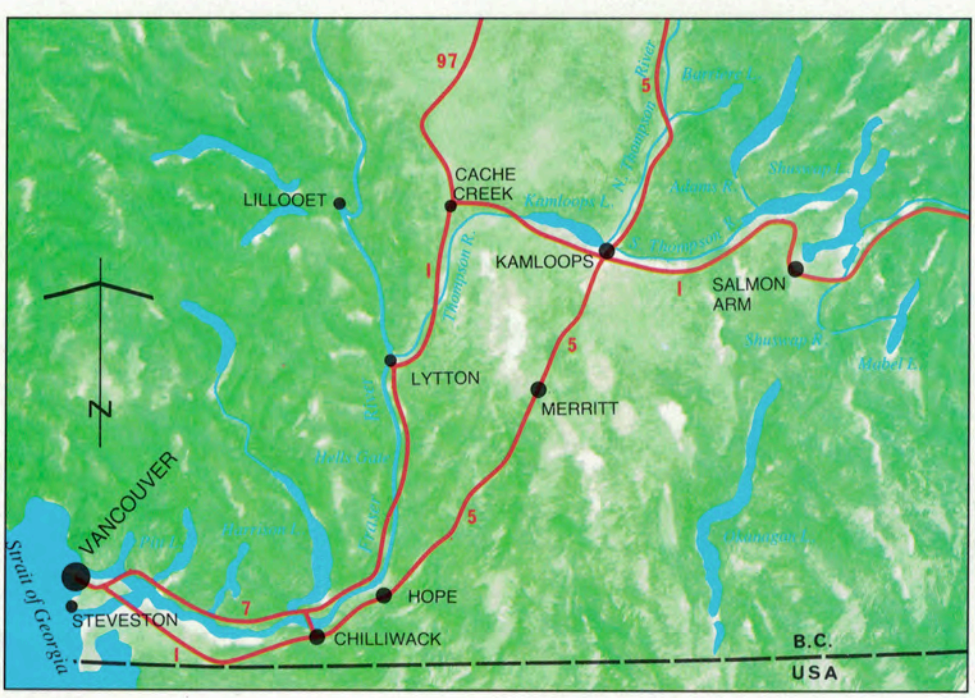
Fishermen off the mouth of the Fraser at Steveston began to harvest sockeye salmon in 1860. The first of many canneries opened a decade later. These canneries packed sockeye from all over the Fraser system, which had several strong runs, including the Adams River and the Quesnel River.

Fishing boomed into the 20th century. Until 1913. During that year rock dumping and slides from railway construction in the Fraser Canyon blocked much of the river at Hells Gate. After 1913 fewer than half a million sockeye a year made it to the Fraser River spawning grounds.

The Adams River run was already in trouble because of a splash dam, built in 1908 to help move logs down the river. When it opened, the outflow flooded eggs and young fish downstream, and onrushing logs scraped the spawning beds. When the dam closed, the river nearly dried and fish eggs froze in winter. The dam wasn't used after 1922 and there was a rebirth of the Adams River run. By 1934 the Adams River had achieved dominance as the chief sockeye-producing stream in the Fraser system.

Salmon runs, however, were still far below historic levels. So during low water in the winters of 1945 and '46 a fishway was built on each side of the Fraser River at Hells Gate. Baffles enclosed in concrete walls reduce the currents and create pools which help migrating salmon ascend the turbulent waters. Other fishways were built later.

By 1958 the Adams River sockeye run amounted to 15 million fish, the largest



Previous pages: *male and female sockeye salmon spawning in Adams River, captured by photographer Michel Roggo using a camera housed for underwater action. Besides being a route for the big sockeye runs, the Fraser River and tributaries are also home to the other four Pacific species of salmon, including,* **top**, *the pink (humpback).* **Opposite page top:** *sockeye salmon migrate upriver with the life-and-death intensity of their mission to propagate.*

since 1913. It provided a commercial catch of 11.7 million fish. Since construction of the fishways the American and Canadian fleets together have caught more than a million Adams River sockeye in a single day.

Roderick Haig-Brown Provincial Park, officially designated in 1977, encompasses the Adams River. Yet even with ensured protection of its spawning grounds, the life of an Adams River sockeye is in perpetual jeopardy.

After two years at sea, dodging the voracious jaws of killer whales, seals, sea lions, and other predators, the Adams River sockeye home in to the Fraser in early August. Off the mouth of the river they run a gauntlet of commercial gillnetters and purse seiners before starting an 18-day, 485-kilometre odyssey up the Fraser and Thompson rivers, through the Shuswap lakes to the Adams River.

About three-quarters of the salmon taken from the Fraser system by Indians are sockeye, a large number from the Adams River runs. As the Adams River fish enter the Fraser, natives from three dozen Indian bands line the riverbanks, scooping fish with dip nets and snagging them in gillnets. In 1986, the last peak year for Adams sockeye, Indians set nearly 400 gillnets as far upstream on the Fraser and Thompson rivers as Savona, on Kamloops Lake. By the time the run had passed they'd taken 150,000 fish.

Still 1.3 million made it to the Adams River spawning grounds in 1986, although that's down from 2.1 million in 1982. By the time the sockeye arrive their battered bodies have turned blood red. The males take on a fearsome, prehistoric look with humped back, hooked snout, and sharp white fangs. They haven't eaten for nearly eight weeks: the gruelling return to their place of origin has consumed 90 percent of their body fat and half of their stored protein.

Just three weeks from death, one final task remains: to propagate. Mating pairs stake their territories and the female builds a "redd" by swishing a depression in the gravel with her tail. While the male guards against intrusions, his mate lays about 750 eggs. The male then sprays a milk-colored milt over the eggs and the female buries them. The process repeats, a bit farther upstream each time, until nearly 4,000 eggs have been laid. The exhausted pair of sockeye die within days; their carcasses become food for scavengers — eagles, ospreys, gulls, bears, mink, and river otters.

Laying the eggs, however, by no means assures continuation of the race. Only 800 of those 4,000 eggs will survive to emerge from the gravel as miniscule sockeye fry. After drifting downstream into Shuswap Lake, under cover of darkness, 600 will fall prey to Dolly Varden char, rainbow trout, bass, and other predators. Two hundred smolts may migrate to the sea, but only 10 will likely live to begin the return journey to the spawning grounds. Eight of those will be caught, leaving two fish, from the original 4,000 eggs, to produce offspring.

Even with such impossible odds, more than a million crimson fish scatter across a 120-hectare spawning area in the

INSERT: MINISTRY OF PARKS PHOTO

Adams River every four years. And for these weary salmon there's no privacy in their final days. In 1986 more than 220,000 people came to watch — they arrived in school buses, in tour groups, in Boy Scout packs, on senior citizens' outings. On busy days 20,000 spectators tramped the banks of the Adams River. Park interpreters explained the inexplicable activities of spawning fish. B.C. Parks and

While the Adams River in Roderick Haig-Brown Provincial Park was teeming with spawning sockeye during the last major run in 1986, **top**, *its shores — a mere 11 kilometres long — were teeming with up to 20,000 people a day,* **insert**. *Greater numbers of people are expected in the fall of 1990. While the male guards against intrusions, a female sockeye builds a 'redd',* **left**, *by swishing her tail on the river bottom.* **Opposite right:** *hell-bent pinks heading upstream.*

Lingering on the Shuswap

Visitors to Adams River would be wise to allow time to explore several other sights around Shuswap Lake. Along the north shore of the lake, beyond Roderick Haig-Brown Provincial Park, there are campgrounds, resorts, country inns, pubs, restaurants, marinas and other amenities in the communities of Lee Creek, Scotch Creek, Celista, Magna Bay, Anglemont, Horseshoe Bay, and St. Ives. There are also cottages, campgrounds, fishing boat and houseboat rentals at Adams Lake. There's an endless supply of pleasant beaches on both Shuswap and Adams lakes.

Fishing for big rainbow and lake trout is particularly good in autumn, and boats can be rented in St. Ives and Scotch Creek. Horses can be hired at Scotch Creek, and there's golfing near Anglemont. Shuswap Lake Provincial Park has nice picnic spots and nature trails. The historic town of Seymour Arm is a 45-kilometre drive beyond the community of Anglemont. Silver Beach Park, at Seymour Arm, has long sandy shores and there's fascinating canoeing water off the mouth of Seymour River.

For details on sights and activities throughout the Shuswap area, see *KLIX, Beautiful British Columbia Magazine's* ultimate guide to travel in B.C. and Alberta.

the Department of Fisheries and Oceans set up live-fish exhibitions and erected a marquee tent to show continually running fish movies.

"We've had traffic jams that are eight kilometres long getting in here," says Phil Rathbone, of the B.C. Parks Shuswap zone. "On weekends and holidays we'll have four or five of our own security staff, and five or six RCMP directing traffic." Occasionally people travelling the Trans-Canada Highway to Calgary get caught in the traffic jams and inadvertently directed to the park. At first they are understandably annoyed. "Then they tell us they wouldn't have missed it for the world," Rathbone laughs.

A Japanese film company and the British Broadcasting Corporation recently produced movies of the Adams River run to show in their home countries.

"The people who did the filming for Japan said, 'this is going to generate a million visits for the 1990 run'," says Rathbone. "I hope they don't all come on the same day."