

SALMON THAT SURVIVED AGAINST THE ODDS WILL FORM THE BASIS OF A NEW GENERATION

B.C.'s miracle of the fishes

Native groups and fisheries workers are banding together to restore the once-bountiful Okanagan salmon runs, MARK HUME writes



BY MARK HUME

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VANCOUVER -- There isn't much left of the natural Okanagan River: just six kilometres of unconstrained, free-flowing water.

For the past century, most of the rest of the river has been channelled into a system of dams and canals that were built by the government in the early 1920s to promote agricultural development.

For almost its entire length, the river runs like a big ditch down the middle of the south Okanagan Valley. It seems an unlikely place for a miracle to take place, but, against all odds, a population of wild salmon has clung to survival here, more than 1,000 kilometres, as the fish swims, from the Pacific Ocean.

"Somehow they have hung on and have kept coming back," fisheries biologist Jillian Tamblyn said.

"They just seem to be little troopers."

This weekend, the Okanagan River salmon got a major boost when an alliance of native groups and government fisheries workers released more than one million young fish into the watershed.

The Okanagan River used to be a beautiful wild salmon stream. But now it flows freely only briefly, near the town of Oliver, where it snakes through a green bower of trees, the way it once did for hundreds of kilometres, creating pools and riffles for salmon to spawn in.

Above and below the natural section, the river is mostly contained by dikes. It is a sluiceway.

The irrigation system has helped the orchards and vineyards of the Okanagan Valley to flourish, but the river itself has suffered.

So have the salmon which run up the Columbia River from the coast of Oregon, before turning north into the Okanagan River to enter Canada and seek out the spawning beds they first established nearly 10,000 years ago.

Somehow, over the past century, the fish kept making that run, despite rapid development in the Okanagan Valley and the construction of a series of dams, including nine massive hydroelectric impoundments on the Columbia River.

Fish passageways were built into the dams on the U.S. side of the border, allowing the salmon to make their way to the Okanagan River. But near Vaseux Lake, the returning salmon hit an impassible irrigation barricade called the McIntyre Dam.

Since the early 1920s, the dam has blocked upstream migration, cutting off salmon from nearly half the spawning areas in the Okanagan watershed.

Fortunately, that dam was built just upstream of the last free-flowing section of the Okanagan River, so the

salmon had an alternative to fall back on. And that's just what they did.

Some years, only a few hundred fish returned to spawn. Other years, several thousand made it back and on good years up to 30,000 arrived. But no matter how many there were, there was always the risk they just might stop coming, as they have done in dozens of other tributaries of the Columbia River where runs have become extinct.

Although it is not known how many spawned in the Okanagan River, historically it is clear it was a significant run -- perhaps in the millions -- because native people came from throughout the region to spear fish below the rapids at Okanagan Falls.

But the falls were drowned by the irrigation project, the rapids were silenced, and over time the native fishery dwindled away, just as the salmon run did.

The elders never forgot, however, and passed along stories of rich salmon runs to a younger generation that, several years ago, decided to do something about it.

Working with the federal Department of Fisheries and provincial Ministry of Water, Land and Air Protection, native leaders in the Okanagan have developed a plan to restore salmon runs in the Okanagan Valley.

A few years ago, as part of a cultural reawakening, the Okanagan Nation Alliance held a ceremony on the banks of the river to coincide with the fall return of spawning salmon.

Elders told stories of how a sacred creature, known as Sen'klip, or Coyote, first brought salmon to the valley.

They danced and they called on the spirits to restore the salmon runs to their full glory.

"It was the first time in a long time that they sang songs to welcome the salmon home," said Ms. Tamblyn, who works for the Okanagan Nation Alliance fisheries department.

It marked a turning point.

Last year, after the spirit songs had been sung, fisheries technicians with the Okanagan Nation waded into the river to capture male and female salmon. Stripping them of eggs and milt, the workers raised 1.1 million salmon to fingerling size in a hatchery.

In the wild, the vast majority of salmon do not survive the transition from egg to fry. In a controlled hatchery, where there are no predators, no flash floods and no pollution, almost all survive.

Last weekend, the fish were released in the Okanagan River, upstream from the McIntyre Dam, near Skaha Lake. For the first time in 85 years, salmon are swimming in water from which they had been absent since the river was dammed.

The McIntyre Dam is now being studied to see if a fish passageway can be added in time to greet the adult fish when they return to spawn in three or four years.

The Okanagan Nation is also studying sections of the lower river, and are developing plans to move the dikes back, "so that the river can start to wind across the valley in some places," Ms. Tamblyn said. They are hoping to re-create big sections of the wild and natural river that were lost when the irrigation system was built.

Although the Okanagan Nation Alliance salmon project has so far focused only on sockeye salmon, a discovery by fisheries workers may expand the scope of the project.

In the free-flowing section of the river, among the red-bodied spawning sockeye, they found chinook salmon, long thought extinct in the Okanagan. Using DNA samples, the alliance has shown the chinook are not strays that wandered in from the Columbia River, but are a distinct stock, unique to the Okanagan River.

There may be fewer than 50 left, and, this spring, the Committee on the Status of Endangered Wildlife in Canada recommended they be listed as an endangered species.

That listing, when it comes, will give the alliance some extra clout and perhaps even some additional funding as they fight to restore salmon in the valley.

Although things are looking up, the Okanagan salmon still face many obstacles.

The threat of higher water temperatures from global warming is a concern because the Okanagan River sockeye are the most southerly population in North America.

There is the problem of predation by exotic species. And there are concerns about how the reintroduced sockeye will interact with kokanee, a non-migratory species of sockeye found in Skaha Lake.

"We're taking it a step at a time," Ms. Tamblyn said. "It's a very complex project and a number of studies are being done. A lot of things have to be considered. But it's really exciting what's happening here."

Word has started to spread through the Okanagan Valley about the remarkable project.

Now when the Okanagan Nation goes down to the river to sing to the salmon, people from all walks of life are coming out to join them.

"There are people from the community, school groups, elders, all kinds of people," Ms. Tamblyn said.

She described it as a cross-cultural celebration. But it's more than that: It's a miracle of the fishes.

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