Commentary: Various factors may be combining to hit Fraser River sockeye

BY QUINTIN WINKS, CANWEST NEWS SERVICE AUGUST 31, 2009 10:02 AM

Ask just about anyone with a history of fishing for salmon along Canada's West Coast and they'll likely say it's not what it used to be.

Fishing seasons keep shrinking and fewer fish are caught. Salmon stocks have been mediocre at best lately, and often downright dismal. Entire runs all but vanished this season, with salmon returning to their spawning grounds in record low numbers, most notably on the Fraser River. Millions of salmon predicted to swim up the river to lay their eggs simply never showed up. Where they went is open to much speculation and scientists and ecologists are casting about desperately for answers.

In the thick of the controversy over the disappearing fish is the British Columbia fish-farming industry. The government, scientists and environmentalists have heaped blame on the industry in recent years, and it's the first place many are turning for answers about the great vanishing of millions of sockeye.

In the Alberni Valley, the subject of salmon doesn't come with the same clang of alarm that it does in the Lower Mainland. For starters, the sockeye run there this year was the best in recent memory. Anglers were catching fish by randomly dragging unbaited hooks through the water. And while fish farms are largely blamed for the current state of wild salmon stocks, fish off Port Alberni don't pass any open farms during their annual migration. Yet drawing the conclusion that fish populations are booming here because they don't pass fish farms is patently false.

Instead, with everyone from the Department of Fisheries and Oceans to environmentalists leading the charge for answers through forensic science, the conclusion is that there are a number of factors at play when it comes to the survival of salmon.

"I don't think there's any question around the adult salmon and the impact of sea lice," said Barry Rosenberger, area director for the DFO and the Fraser Panel chairman.

"Fish farms may well be having an impact to some degree, though they can't explain all the problems in the Fraser sockeye."

Tests of Fraser sockeye show that some are infected with sea lice, but not lice that are common to fish farms nearby, Rosenberger said.

"That's not to say that fish farms don't have an impact, but it's difficult to see where they explain all of this," he added. "Clearly there's issues going on in the marine environment and they're interconnected in different ways."

Among those issues is rising sea temperatures. The increase has led to the migration north to Canada of warm-water predators, such as Humboldt squid and mackerel. Still, they're unlikely to be the cause of such mass disappearances. But the decline of plankton, a big source of food for salmon, could be.

"The part where people are disappointed is that we don't have all the directive science," Rosenberger said. "But to understand these things you need to have a long-term trend of science. And if you don't have the science over a period of time, if you just have points of information, when you try and do an evaluation of it, it might not answer all of your questions."

Craig Orr, executive director of Watershed Watch Salmon Society, mourns the loss of scientific study at the federal level. He said there was once a very strong fisheries research board attached to the federal government, but that much of that science capacity has eroded.

"We have very little capacity for looking at what's happening in the near-shore ocean environment right now and that's a tragedy, considering how valuable our wild fish are," Orr said.

Orr claims that independent studies have shown that the biggest impact on wild salmon, bigger even than over-fishing and global warming, are fish farms. But he also stops short of getting into specifics when it comes to apportioning that blame. Instead, he blames a number of factors affecting wild salmon, from past over-fishing to poor ocean productivity. But one of the leading suspects he said, remains sea lice.

Sea lice live on salmon. They are able to swim for short bursts from fish to fish. They prefer smaller salmon, but will also attack bigger ones. Sea lice have few known natural predators, but are controlled in fish farms with a pesticide called SLICE.

"But it's a pesticide that probably has effects outside of killing sea lice and people worry about applying those kinds of drugs on a consistent basis," Orr said. "They're expensive for the farmers to administer and these things kill anything with a shell in certain concentrations, including shell fish, and we just don't know the fate of chemicals like SLICE."

If scientists could formulate a drug or chemical that would specifically target sea lice without affecting other parts of the environment, then they might be able to resolve some of the issues facing wild salmon, Orr said.

"You would still have disease transfer and you would still have the escape issue," Orr said. "That's why groups like Watershed Watch and Coast Alliance for Aquaculture Reform are calling for closed containment technology, at least a commercial scale trial for it."

Mary Ellen Walling, executive director of the B.C. Salmon Farmer's Association, admits the industry has become the punching bag for scientists, governments and environmentalists. Much of that stems from early practices that weren't environmentally sound.

"We carry a little bit forward, some of the early bad reputation that we did earn," she said. "So part of the challenge we have now is to make people understand that things have changed drastically. There have been a lot of improvements made. There's always more that you can do, but I think the industry is very responsible and different than it was in the early days."