

In New England, Unexpectedly strong salmon returns offer hope of recovery

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Posted By Kevin Miller

Atlantic salmon are returning to rivers in Maine and elsewhere along the North Atlantic this season in numbers not seen in years, suggesting to biologists and conservation groups that ocean conditions for the famed sportfish are improving after decades of decline.

On the Penobscot River, biologists have counted more than 3,100 salmon at the Veazie dam fish trap so far — more than double the number that returned last year and the highest spawning levels since 1986.

The Narraguagas River in Down East Maine, meanwhile, has recorded 186 fish so far this year compared with 76 in 2010. And biologists working the Kennebec River have counted 63 salmon, a figure still abysmally low given the river's history but a definite improvement over last year's tally of just seven fish.

"And it's not just Maine rivers," said Oliver Cox, a biologist at the Maine Department of Marine Resources. "It is up and down the North Atlantic into Canada and Nova Scotia."

The Merrimack River, which flows through Massachusetts and New Hampshire, is experiencing the largest salmon run in at least 30 years, with 400-plus fish returning so far. Organizations in Canada — the last stronghold for Atlantic salmon in North America — are seeing larger and more plentiful fish in some rivers. And news agencies in Ireland reported this week that salmon are spawning in Dublin's Tolka River for the first time in a century.

So what, exactly, led to this year's unusual spawning runs? And could they signal a recovery for a fish once abundant throughout the North Atlantic?

Observers said higher at-sea survival rates are the likely answer to the first question, although determining what has changed in the ocean will take more study. As for the latter, current figures are encouraging but do not signal a clear shift for a species that would likely be extinct in the U.S. were it not for aggressive state and federal intervention.

"We need a lot of good years in a row as opposed to a few good years in a row" to begin celebrating, said Andy Goode, vice president for U.S. operations with the Atlantic Salmon Federation, a nonprofit conservation group.

Atlantic salmon are listed as an endangered species in Maine and are, therefore, protected by a myriad of laws and regulations. But biologists and other observers said the most likely reason for the sudden uptick in salmon returns can be found in the ocean environment, especially in the waters around Greenland.

After leaving their rivers of birth as juveniles, most Atlantic salmon make their way to Greenland or the Labrador Sea where they feed and grow. Adult fish that return to spawn have spent at least one and often two or more winters in the waters off of Greenland or somewhere in between.

Commercial fishing for wild Atlantic salmon has been largely halted (the Atlantic salmon enjoyed by consumers is almost exclusively farm-raised). Additionally, many government agencies and dam owners — including those in Maine — have spent large sums building fish bypasses or lifts to allow salmon to get beyond dams.

Yet salmon spawning runs in the U.S. have remained flat or nonexistent, suggesting that predators, lack of food, temperature changes or other factors in the ocean were killing juvenile and adult fish.

"Slight improvements in marine survival have resulted in more salmon arriving to feed in the Labrador Sea and Greenland and returning home to spawn," Patricia Kurkul, Northeast regional administrator for the National Marine Fisheries Service, said in written statement.

"Hopefully we will see a large number of returns for several years," Patrick Keliher, acting commissioner of the Maine Department of Marine Resources, said in a statement. "The next step is to review our monitoring data to see what management actions, if any, have played a roll in the increased returns. Given that many locations are experiencing high returns, an increase in marine survival is most likely the driving factor."

Salmon watchers have been encouraged this year by not only the number of salmon returning to spawn but by the health and size of the fish.

Cox, the DMR biologist who works with Penobscot salmon, said teams tending the Veazie trap started seeing larger fish early on. Many of the fish taken to the federal fish hatchery to serve as broodstock were in the 10- to 12-pound range, he said.

Last year, just over 1,300 salmon returned to the Penobscot to spawn. That was down from nearly 2,000 the year before and more than 2,100 in 2008. But this is the first year since 1990 that more than 3,000 fish have returned.

John Burrows with the Atlantic Salmon Federation in Maine and others would like to see strong returns for four or five years — an entire generation for Atlantic salmon — before declaring a positive trend.

But Burrows optimistically pointed out that, after accounting for the fish taken to the federal hatchery for breeding, more than 2,000 fish were released upstream in the Penobscot this year.

"So there are close to 2,500 salmon swimming around in the river," he said. "We have not had that many fish in the river in decades and decades."

NB's Super Salmon Run in 2011

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by John Chilibeck A-1 (on Sat. Sept. 17, 2011)

For the better part of a decade, Richard Cassidy of Saint John has packed his fly rod, hip waders and camping gear in his car trunk to make the three-and-a-half hour trek to the Dungarvon River in the middle of the province, in pursuit of the elusive fish he's been after since a teenager.

This June, he finally landed his first wild Atlantic salmon - a 59-centimetre grilse, just the right size for eating: If a salmon is landed at 63 cm or more, conservation law requires it to be returned to the river.

"Sometimes when I show up there's no run, or I just missed it, or the water's too hot and it makes them lazy," said Cassidy, 33, who made the catch during a four-day trip. "This year, the conditions were good. The water was a little high and cool."

Cassidy is one of many anglers this season who have landed a salmon, a powerful, long-distance fish whose abundance in New Brunswick was once legendary but is now considered by many to be under threat, particularly in the south where the species is officially listed as endangered in both the outer and inner Bay of Fundy.

But while the salmon have yet to return in large numbers to the St. John, Nashwaak, St. Croix or Magaguadavic rivers, where dams have wiped out fish, the story is different up north: Scientists with the Department of Fisheries and Oceans say many of the counts are the highest they've observed in years, even if they are at a loss to explain why it's happening.

David LeBlanc, the executive director of Restigouche River Watershed Management Council, said all the camps on tributaries in the area were reporting catches that are approximately 50 per cent higher than normal.

"They're catching many more 10- to 12-pounders," LeBlanc said, adding that this had led to some unfriendly competition. "Some open stretches were crowded up here. The Little Main River had high numbers of anglers that caused some conflicts on the river. There were too many people who weren't doing a proper rotation, and were on the pool as early as four in the morning."

LeBlanc said scientists weren't sure why the numbers are so high, although everyone has plenty of theories, some of them serious, others not so.

"One guy told me it was because of the earthquake and tsunami in Japan," he said, but not for the reason some might think. "He said many of the Japanese fishing boats in the North Atlantic where the salmon go were called back home to help."

The council and DFO want to confirm some of the counts at the barriers with a team of snorkellers who will look below the water. The barriers are set up to trap the fish as they enter the river system. The younger grilse are released upriver for anglers, while the larger mature salmon are kept until October, when they are released to spawn. The idea is to protect them from poachers and give them a better chance to survive.

The snorkel count was supposed to start next week, but has been pushed back another seven days because of high water and the muddiness of the river, caused by above average rainfalls in New Brunswick this summer.

The initial counts, which are done every half month from May 31 to Nov. 30, have been excellent so far.

At the Upsalquitch Protection Barrier on the Restigouche River, for instance, 627 mature salmon, which had spent two years at sea, were counted as of Thursday.

That compares to 274 that were observed by the same time last year. It also compares favourably to the 345 average annual count between 1993 and 2010.

For grilse, or younger salmon that spend a year at sea, the numbers were not quite as good: 633 were counted up until Thursday, compared to the previous 17-year annual average of 692. However, aside from a banner year in 2008, the numbers had been in fairly steady decline. It is now the second year in a row that the count of younger fish is up.

And that's just one of nine count stations in northern New Brunswick. Salmon counts are also up at Dungarvon Protection Barrier, the Northwest Cassilis Trapnet, the Northwest Protection Barrier, Jacquet River Protection Barrier and the Nepisiguit Counting Fence.

Counts are slightly down at the Southwest Juniper, the Southwest Millerton Trapnet Barrier and the Little Main Counting Fence.

Scientists, however, are struggling to explain why the salmon are doing better, because they don't know what's happening out in the open sea, the vast expanse in which the fish are surviving in bigger numbers and returning to the Miramichi, Restigouche and other northern rivers.

One thing is certain: the teeming salmon this season has meant a boon for anglers.

Larry's Gulch, the exclusive government resort near Kedgwick at the top of the Restigouche, had a banner year. Manager Mark Ramsay said it was likely the best season at Larry's Gulch in 77 years. Records have been kept since 1934, and people at the resort have never

caught as many salmon as they have this season. When it was open in June, July and August, with eight rods in the water, anglers caught 801 salmon. That compares to about 270 the year before and easily shattered the previous record of 611 in 1986.

Ramsay says there are probably many factors for the better returns, but he's convinced that catch-and-release, which is mandatory on many parts of the Restigouche, is helping matters. Larry's Gulch went to a complete catch-and-release program two years ago.

"No one will probably know why the numbers are so high for a number of years," he said, pointing to the need for more scientific study. "But many of the fish that were caught and released were caught and released previously. You could tell by looking at them. Part of their jaw might have been missing, or there might have been a hook stuck in them."

Doug Underhill, the author of the recently released *Salmon Country*, posts a regular survey on his website based on his conversations with Miramichi outfitters. While the fall run is yet to get underway, he characterized the earlier part of the season as a bonanza summer.

"They were seeing fish, besides catching them, you know? It's nice to know the fish are there and you're not fishing over rocks."

The 65-year-old remembers some of the tough years, particularly in the 1970s, when salmon numbers were very low.

"In spite of the good news, there's also a little caution there, too. We've had good years lately, compared to maybe the last decade, we're having very good fishing. But we still have to go a long way to restore the spawning to what it once was."

Underhill, who's careful to note he's not an expert, believes part of the turnaround could be attributed to a salmon conservation agreement put in place nine years ago. The Atlantic Salmon Federation and the North Atlantic Salmon Fund are paying about \$200,000 a year to fishermen in Greenland to abandon their commercial salmon fishery in favour of more sustainable fishing or tourism projects. The Greenlanders still catch salmon for their own food, but they don't harvest them for foreign markets any more.

This means many more mature salmon are returning to New Brunswick, allowing them to spawn.

Sue Scott, a spokeswoman for the federation based in St. Andrews, agreed with Underhill's assessment.

"We are hearing lots of good news from the anglers, it's been a good fishing season," she said. "In a good many cases, the water levels and temperatures have been ideal. But we're also seeing at the counting facilities - which of course don't count every salmon, but are looking at trends - the trends are good."

For the most part, she said the rivers are showing better numbers than the previous five-year average. She credited, in part, the Greenland agreement. In 2002, the Greenlanders landed 43 metric tonnes of wild Atlantic salmon.

"The survival numbers are definitely up because of that," she said, before adding with a laugh, "If they're not killing them, they're coming home."

Another reason for the better returns, she said, are catch-and-release efforts.

"In New Brunswick, on the rivers that allow catch and kill, the anglers are allowed to take eight grilse per season. But more and more of the fishermen recognize this is excessive and they let them go."

If the fish are released and lucky enough to evade other anglers downstream, they eventually go back out to sea, grow bigger, and one day return to the river to spawn.

The big mystery is what's happening in the Atlantic Ocean.

"In years past, there was a high mortality of salmon at sea, and it's a big, black hole out there," she said. "We are doing marine research to try to pinpoint the problems and where it's happening. But it could be that the environment is more inviting to the salmon, whether the food supply is better or the temperatures are better, that's a question for the scientists."

Gérald Chaput, a biologist with Department of Fisheries and Oceans in Moncton, said the grilse counts look fairly good in most parts of Eastern Canada, which means the smolt, or younger, fish that went out to sea in 2010 had higher rates of survival compared to the last decade or so - something scientists had predicted. But he said forecasting salmon returns is never a sure thing.

"Where we monitor mortality rates at sea, where people actually count smolts and track adults - and we've been doing that for years in the recent years - it's up and down. One year it's good, the next year it's bad, the next year it's good. It seems to be really random.

"What's causing it? We don't really have the answer. We don't really know."

Chaput said it's possible that marine conditions have become more stable. A lot of salmon normally perish in their first few months at sea but the last few springs have been fairly good, climate-wise, and the fish may have started growing quickly when they enter the ocean, he said, increasing their survival chances. And he cautions the news isn't all rosy. In the late 1980s and early 1990s, salmon returns were much better on many rivers in northern New Brunswick.

Still, two years of better sea survival for salmon, combined with a wet New Brunswick summer, have made anglers happy.

"Two things have happened out there: The fish coming in were good and the water conditions were excellent," Chaput said. "There was lots of water, and fish love lots of cool water. It makes them active and makes them move a lot."

Despite all his years of studying salmon, Chaput doesn't go for fly-fishing.

"I've been trying to avoid it. They say once you catch one, that's it, you're done, you're hooked."