



New Study Links Sea Lice to Wild Salmon Decline

For Immediate Release

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Echo Bay - The first scientific published report on the impacts of lice on juvenile Pacific salmon has demonstrated a link between sea lice from fish farms and the decline of certain wild salmon stocks in Canada's Pacific Ocean. Results of the study by a team of Canadian researchers appear today in the Canadian Journal of Fisheries and Aquatic Science, the leading Canadian peer-reviewed scientific fisheries journal.

"This study confirmed that where there are fish farms, there are sea lice. Where there are no fish farms there are no sea lice. That connection is now established," said lead author Alexandra Morton, a registered professional biologist. The paper, based on a 10-week study led by Morton, shows that wild fish were significantly more infected with parasitic sea lice when near salmon farms

The researchers note that their findings conflict with information from the salmon farming industry and government agencies that have disputed this connection. Norway, the world leader in salmon farming, acknowledges that net-pen fish farms act as incubators for sea lice, causing collapse of wild stocks and therefore strictly regulates lice levels on salmon farms in that country, Morton explained.

Morton and her three co-authors measured sea lice levels on juvenile pink and chum salmon in the Broughton Archipelago off the northeast coast of Vancouver Island. The area is home to 28 salmon farms, the densest concentration of fish farms on the British Columbia coast. They compared sea lice levels near salmon farms to those found on juvenile salmon 75-400 km. away from the Broughton Archipelago.

"Our study has enormous implications for public policy as it would appear that some areas of this coast are not suitable for fish farming. We are seeing the consequences of fish farms in wild salmon nurseries such as the Broughton Archipelago where baby wild salmon are exposed to the massive salmon farms when they are just too small to survive the threats. We are accepting risk to another of our most-productive rivers if we allow this industry into the nursery waters off the Skeena River.

Juvenile pink and chum salmon are smaller than any other salmon. They weigh less than one-third of a gram and are about the size of an AAA battery when they go to sea. Morton believes it is because of their extremely small size that the pink

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salmon runs in the Broughton Archipelago have collapsed two years in a row. The limited research done to date on the effects of sea lice indicates that salmon can survive only about one louse per gram of their body weight. That means that even one mature louse on a fish weighing 0.3 gram, could be lethal. The Pacific Fisheries Resource Conservation Council (PFRCC), an independent organization headed by former federal Minister of Fisheries John Fraser, released an advisory in November 2002 on this topic (www.fish.bc). The Council found that the number of pink salmon spawners in the Broughton Archipelago decreased from 3.615 million fish to 147,000 fish in 2002, a 98 per cent collapse. The council acknowledged that while scientific certainty is not absolute, European research does indicate that sea lice epidemics, such as Morton recorded, are associated with salmon farming and wild salmon collapses. Thus, the PFRCC believes that sea lice were linked to the decline observed in the Broughton Archipelago, the largest collapse in recorded history on this coast.

Morton, a member of the Coastal Alliance for Aquaculture Reform, which brought sea lice to the public's attention in 2001, believes that in order to preserve wild fish stocks, farmed fish have to be separated from the marine environment.

"There are alternative technologies available that make it possible for fish farmers to grow fish in closed facilities that separate farmed fish from the marine environment. These technologies prevent disease and parasite transfer between farmed and wild fish. This would benefit both the farmers and the wild salmon-based economies. We need governments and industry to implement effective solutions now before we see more unnecessary extinctions of wild salmon runs", she said.

"I don't see harming wild salmon as a prerequisite to farming salmon. Pink salmon are the ecological bloodstream of BC, essential to tourism, logging, fishing and First Nations. It seems a waste to feed them to sea lice"

- 30 -

Study is available at http://pubs.nrc-cnrc.gc.ca/cgi-bin/rp/rp2_vols_e?cjfas

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