

Fraser River sockeye may be at risk of sea lice infection from salmon farms

March 23, 2009: Vancouver, BC - Genetic analyses have confirmed the predominance of Fraser River populations in samples of juvenile sockeye salmon caught near salmon farms in northern Georgia Strait. Fraser sockeye populations include the world famous Adams River and highly threatened Cultus Lake salmon.

Raincoast Conservation Foundation in partnership with the Coastal Alliance for Aquaculture Reform (CAAR) began sampling juvenile sockeye in the region east of Vancouver Island in 2007 as part of a larger study investigating sea lice levels on juvenile pink and chum salmon near active farms. Sockeye were the most heavily infected species that year, with more than 90% of individuals near farms infected with one or more lice.

There were more salmon farms active in the Georgia Strait during 2007-2008 than the Broughton Archipelago, the area most strongly identified with sea lice outbreaks and associated population-level declines in pink salmon.

“We are not surprised by these results given the large number of farms in the area and the historic migration route of juvenile Fraser sockeye,” Michael Price of Raincoast said. “Obviously louse parasitism from farms affects more salmon species from more areas than previously recognized,” Price continued.

Preliminary laboratory results identified 30 Fraser River stocks (sub-populations), with dominant stocks in 2007 from Chilko and Quesnel Lake, and in 2008 from Chilko and Shuswap. Approximately 60% of the sockeye sampled in 2007 and 99% in 2008 were from the Fraser River.

“We don’t yet fully understand the implications of these results,” said Craig Orr of Watershed Watch and CAAR, “but given that recent peer-reviewed science has shown population level effects of lice infesting juvenile salmon, and given recent declines in Fraser sockeye, we should be concerned.”

Juvenile sockeye are larger than pink and chum salmon sampled concurrently and may be less susceptible to lice parasitism, but they are also smaller than wild Atlantic salmon and sea (brown) trout juveniles in Europe where lice from farmed salmon have caused major declines.

The Pacific Salmon Commission contributed to the DNA analysis with the cooperation of Fisheries and Oceans Canada’s Pacific Biological Station. Results from this study will be published.

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For details on lice infestations of sockeye in this region, see: Morton, A., R. Routledge, and M. Krkosek. 2008. Sea louse infestation in wild juvenile salmon and Pacific herring associated with fish farms off the east-central coast of Vancouver Island, British Columbia. *North American Journal of Fisheries Management* 28: 253-532. <http://www.farmedanddangerous.org/page/sealicerereports>