



Raincoast Research Society

## Feared Atlantic Farm Salmon Virus Identified in British Columbia

**(BRITISH COLUMBIA, January 7, 2016)** A scientific paper released on January 6, provides the first published evidence that a European variant of infectious salmon anaemia virus (ISAV) is present in British Columbia, Canada. The study, [Discovery of variant infectious salmon anaemia virus \(ISAV\) of European genotype in British Columbia, Canada](#), tested over 1,000 farmed and wild fish. European ISAV is the most feared salmon virus in the salmon farming industry.

When ISAV spread to Chile in Atlantic salmon eggs, there was no response to contain it. In 2007, it spread rapidly, causing \$2 billion in damages and outbreaks continue.

Unlike Chile, BC has wild salmon that contribute billions of dollars to the economy through tourism, commercial and sports fishing. The risk of an outbreak has the potential for severe consequences in BC, the Northwestern United States and Alaska.

“I have been following this work for many years. ISA virus is a serious matter,” says Dr. Daniel Pauly, one of the world’s leading fisheries scientists, based at the University of British Columbia (UBC). “A member of the influenza family in open ocean feedlots is a risk Canada should not be taking on the west coast.”

The researchers were not allowed access to Atlantic salmon from farms for testing and so all farmed salmon samples came from markets in British Columbia. Detection of the ISA virus was three-fold greater in farmed than wild salmon, but European ISA virus genetic sequence was detected in 72% of the cutthroat trout that reside in **Cultus Lake**, home to Canada’s most endangered Fraser River sockeye salmon population. Government attempts to restore Cultus Lake sockeye through fishing bans, enhancement and habitat restoration have been unsuccessful.

This raises the questions: Is ISA virus impacting Cultus sockeye and other BC wild salmon populations? And at what cost to Canadians?

“The potential that viruses such as ISAV are contributing to widespread decline in sockeye salmon populations cannot be taken lightly,” states co-author Dr. Rick Routledge. “The findings in this paper should lead to development of more sensitive screening for this specific virus. This opportunity needs to be pursued with vigour.”

The study also found evidence of ISA virus in sea lice.

"Finding ISA virus genetic material in a sea louse from a heavily salmon farmed region, the Discovery Islands, significantly elevates my concern that the pathogen release from the open net farming industry is far more serious than anyone knew," says Dr. Craig Orr, Conservation Advisor for Watershed Watch.

"This was a difficult strain of ISAV to detect, because of a small mutation," says co-author Alexandra Morton. "It is easy to see how it was missed, but we have cracked its code. It is critical that we learn from what happened to Chile. In my view, this work gives BC and our US neighbours the opportunity to avoid tragic consequences."

A lawsuit has been filed in the US against the US Environmental Protection Agency for allowing wild salmon to be put at risk from farmed salmon diseases.

The Virology Journal is a peer-reviewed scientific publication from BioMed Central, a leading academic open access publisher in the areas of biology, medicine and health. BioMed Central is part of global publishing house Springer Nature.

**Backgrounder:** <http://discoverynewvariantisav.typepad.com/my-blog/>

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