

GUEST EDITORIAL

By Brad Hicks



Anatomy of Deception

When anti-salmon farming activists announced the discovery of Infectious Salmon Anaemia Virus in British Columbia last fall it was the beginning of a media storm of innuendo, exaggeration and half-truths.

In October last year there were reports that the Infectious Salmon Anaemia Virus (ISAv) had been discovered in British Columbia, Canada. This virus has been a deadly menace to Atlantic salmon farms in Europe, Eastern North America and Chile. It is a serious concern for fish farmers.

Just the possibility of the virus being present in the Pacific Northwest was enough for anti-fish farming activists to set off alarm bells and start a media storm that fit their well-worn agenda.

For years anti-fish farming activists have been using myth, innuendo, exaggeration, partial truths and de-contextualized information to support their thesis that farmed salmon are a threat to the well being of wild fish. And perhaps one of the boldest attempts at this ongoing demonization of farmed fish is this recently constructed scare that ISAv has been found in Pacific salmon. The orchestration of the scare was so convincing that the Cohen Commission, a federal inquiry into why there are such dramatic fluctuations in Fraser River sockeye populations, was reconvened late in December to hear evidence about this dramatic discovery.

“Lethal Atlantic Virus found...”

The story starts last October 17, at a press conference sponsored by Simon Fraser University in Vancouver, where anti-fish-farming activists announced the discovery that the Infectious Salmon Anaemia virus had been found in wild Pacific salmon. In their press release the activists made several unsubstantiated claims:

Myth: “The ISA virus has been officially reported to be found in the Pacific.”

Fact: No virus has been found. There was only positive Polymerase Chain Reaction (PCR) result. PCR is a screening test which could indicate a virus might be present, but does not confirm the presence of a virus. The actual confirmation of a virus would require substantial additional testing which was not done at the time of the press release. One has to wonder why someone with the backing of Simon Fraser University would go out so publicly with preliminary, unconfirmed results. Perhaps the individuals responsible for putting forward the press release did not actually know that their conclusions from the laboratory reports were premature. Or, perhaps, the motivation was to exaggerate the finding from the lab report so that they could influence the Cohen Commission.

Innuendo: “Now it [the ISA virus] threatens wild salmon and herring.”

Fact: There is no evidence presented to back up this claim. The evidence available from experience in other regions of the world where Pacific salmon are farmed and from experimental evidence is that ISAv has a minimal if any effect on Pacific salmon (*Oncorhynchus sp.*). There is no

evidence that ISAv is a threat to herring. Herring and other species may become infected with the virus, but this virus appears to be pathogenic in Atlantic salmon, but non-pathogenic in other species.

Exaggeration “Releasing a virus as lethal and contagious as ISA into the North Pacific is a cataclysmic biological threat to life.”

Fact: There is no evidence that ISAv has had any negative influence on wild salmon at the population level. ISA was first diagnosed more than 25 years ago in Norway and the wild salmon population in Norway has actually increased over the last 25 years. The main reason for the increase in the wild salmon population in Norway was actually the banning of the drift net fishery in that country. Fluctuations in the wild population of salmon are functioning independently of fish farming.

In BC the 2010 run of wild sockeye salmon was a century high. How does one explain this if the population was being threatened by a virus that was a “cataclysmic biological threat to life”.

Partial truths: “The European strain of ISA virus can only have come from the Atlantic salmon farms.”

Fact: The conclusion that the European strain of ISAv was present in BC at the time of the press release was not confirmed. This was another case of a preliminary screening test simply indicating that it was a possibility not a fact.

The insinuation that the ISA virus could only have come from Atlantic salmon farms is also at best a partial truth. Historically millions of Atlantic salmon eggs were imported into BC long before there was any salmon farming in BC. There have not been any confirmed cases of ISA in Atlantic salmon farms in BC and there have been approximately 5,000 diagnostic tests for ISA in farmed salmon in BC. The only presumptive (unconfirmed) diagnosis of ISA in BC have been in wild Pacific salmon.

De-contextualization: “The Cohen Inquiry revealed ISA symptoms have been reported in farm salmon in BC since 2006”

Fact: No “symptoms” have been reported. The reference to ISA “symptoms” is likely the reference to the histopathological finding of congestion in some fish which can occur for many reasons including mortality associated with ISAv infections but these findings are not pathognomonic (specific) for ISAv infections. The de-contextualization of the pathology findings has been used to insinuate that ISA is present in BC.

So what is the big deal. The anti-fish-farming activists have been using a variety of techniques to create news stories demonizing fish farming for years. What is so different about this particular event?

Having sat through much of the Cohen Commission inquiry, it was my distinct, although perhaps biased, impression that those who were trying to turn this inquiry about fluctuating populations of wild Fraser River sockeye into a fish farming inquiry were not getting much traction. During the inquiry, they used a variety of techniques to influence the inquiry. They leaked documents before they were presented as evidence; they held demonstrations and had a variety of press events. However, none of these tactics seemed to be working. The inquiry appeared to be more interested in getting the facts onto the table and was less interested in speculation and non-expert opinion as to what was happening to the wild sockeye.

The activists continued to look for something to get the attention of the inquiry. They sent samples to a variety of labs hunting for something dramatic. When they received a presumptive diagnosis of ISA in some sockeye salmon smolts they apparently could not contain their enthusiasm. Rather than wait for the additional tests required to confirm

or refute the presence of an actual virus they jumped the gun. With statements full of myth, innuendo, exaggeration and partial truths they were able to have Cohen reconvene the inquiry for a few more days so they could be heard.

During the additional three days of testimony there was a lot of posturing by academics about whose test for ISAv was best, but there was no evidence presented that a virus had been confirmed. Both the Department of Fisheries and Oceans and the Canadian Food Inspection Agency (the competent authority for Canada on reportable diseases) stated that there is no confirmation of the ISAv in the Pacific Region of Canada in either farmed or wild fish.

Cohen now has to take all of the information presented and make a report and recommendations to the Canadian government. It will be interesting to see if his recommendations will be based on factual evidence or gamesmanship.

ANA

What is a “presumptive diagnosis”?

A presumptive diagnosis is a diagnosis based on a preliminary test which is often a screening test used to see if further analysis is likely to be fruitful. PCR type tests are one type of screening test. A PCR tests from a small, hopefully unique, genomic sequence. A positive PCR for viral testing indicates that a specific virus may be present in the sample being analyzed. However, because this is a screening test, it is only an indication that a specific virus might be present. In order to confirm that a specific virus is present, other more accurate and definitive testing must be carried out. For viruses, this means either sequencing or isolation of the virus in cell culture with a few additional tests to identify the specific virus or visualization of the virus using electron microscopy. None of the presumptive diagnosis for ISAv in British Columbia has been confirmed. Therefore the results of all of the viral testing are negative.

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