

THE MEMBER FOR LUNENBURG SPEAKS UP ON AQUACULTURE

Silver Donald Cameron

On January 25, the South Shore Chapter of the Council of Canadians hosted a showing of Salmon Wars in Mahone Bay. By all accounts, the meeting was well attended. One of those present was Pam Birdsall, the NDP MLA for Lunenburg. At the showing, Ms. Birdsall said that she had identified a number of concerns and issues with the film, and offered to send out notes about them. Hearing about this, I wrote to her myself and asked to see her notes.

The document she provided [is here](#). The actual script of the film [is here](#). And my response is below. The Member's comments are in bold, and my reactions are in italics.

PB:

In the movie, Silver Donald Cameron claims that our government has plans to establish massive new fish farms and expand existing fish farms around the province.

SDC:

Is the Member saying that, despite industry members admitting they plan to apply for many more salmon farms – not to mention the endless cheerleading by Minister Sterling Belliveau -- there actually are no plans for any substantial expansion of net-pen aquaculture in Nova Scotia? If so, this is very good news. Can she persuade the Minister to confirm it publicly?

PB:

Through consultation, we are creating regulations and legislation that we hope will build public confidence in the industry.... Have a look at the Aquaculture Strategy for the complete picture. www.gov.ns.ca/fish/NS-Aquaculture-Policy.pdf

SDC:

By all means look at the Strategy, but don't expect much illumination. Here's what we said about it in Salmon Wars:

"As we were wrapping up this program, the government released this new Aquaculture Strategy, which is big on generalities and short on specifics. It talks about monitoring – but not enforcement. It says that government and industry must engage in outreach and respond to local concerns. Fine words. But this document was produced without any community consultation at all – though the government did consult with the industry, in the form of Bruce Hancock and his Aquaculture Association of Nova Scotia."

We have seen nothing since that would challenge our skeptical view of the strategy, or of the cozy relationship between the provincial government and the AANS, whose promotional work has actually been funded by the provincial government.

PB:

Claim: Cooke Aquaculture has 4 applications in to expand or establish operations in South West Nova

The farm in Port Mouton isn't owned by Cooke, it's owned by Ocean Trout. Cooke aren't planning an expansion in Port Mouton. Cooke aren't planning to expand salmon farming in Shelburne Harbour. They are planning on opening a processing plant. Cooke relocated its sites in Shelburne

Harbour a few years ago. This required some changes to the lease but it was not an expansion.

SDC:

We're not talking about operating farms; we're talking about applications. What we said was, "Cooke has applied to establish or expand salmon farming in four communities in southwestern Nova Scotia: St. Mary's Bay, Shelburne, Jordan Bay and Port Mouton." The St. Mary's Bay site has been approved and is operating. The Jordan Bay site has been approved. Cooke did make an application for a new site in Shelburne Harbour, but withdrew it, possibly due to persistent outbreaks of Infectious Salmon Anemia.

The Member is correct that Cooke didn't actually apply for the second site in Port Mouton; instead, they bought the company that had made the application. The existing Port Mouton site was owned by Cooke when we prepared the script; they later gave it up in a swap with Ocean Trout.

And it's true that Cooke say they are going to open a plant in Shelburne. They have been saying that for years. Some people believe it.

PB:

1) Claim: NS Farms are rampant with sea lice.

We haven't had a treatable case of Sea Lice in Nova Scotia in over 10 years. As such salmon farms haven't been treated for sea lice in NS for 10 years.

2) Claim: To prevent sea lice food is pumped full of drugs and pesticides.

Regular fish food doesn't contain drugs or pesticides. If an operator wants to use food containing pesticides they first must apply for a permit from the province. That hasn't happened in over a decade.

SDC:

Please identify the spot in the film where we say that NS sites are rampant with sea lice. I can't find it. We do say that sea lice are a persistent problem everywhere that intensive open-pen aquaculture has become established. Nova Scotia hasn't reached that point yet – so far as we can tell – and the industry's critics are trying to prevent that from happening by stopping the industry's expansion. All the same, we do have footage taken at a site in the Annapolis Basin where workers are feeding penned fish from yellow plastic bags that are clearly labelled "MEDICATED." Here is a still from that footage. To us, "medicated" means that it contains drugs of some kind.



PB:

Claim: Cooke has said they are expanding in Nova Scotia because the regulations are weaker than those in Maine.

Maine's salmon farming industry has tripled since 2001 and is currently valued at approximately \$75 million. Data in 2011 said that every active salmon farm in Maine is owned by Cooke aquaculture which leads one to think that they can deal with Maine's regulations.

SDC:

Gloucester Times, June 14, 2011: 'Nell Halse, vice president for communications for Cooke

Aquaculture, a privately held Canadian company with \$450 million in sales from salmon farming primarily in the Maritimes, but also in Maine, said development is simply easier farther away from people and Maine's gold standard permitting.

"There's more room for development in Maritime Canada," said Halse in a telephone interview. The U.S. offers "limited expansion opportunities under greater scrutiny and cost."

PB:

Claim: Industry provides their own environmental assessments which are simply reviewed by government.

All the salmon farm sites our government have approved, received a full review by the Federal Canadian Environment Assessment Agency.

SDC:

Yes, but who created the document that is reviewed? An applicant for a salmon farm site hires a private-sector consultant to prepare an environmental assessment, and the assessment is submitted to the federal government for review. Since the federal government is also an enthusiastic promoter of open-pen aquaculture, the rigor of the "review" is open to question. In the film, Cindy Webster of the Department of Fisheries and Oceans says that in the 10 years she's been involved in aquaculture, DFO has never refused an application for a salmon farm.

PB:

Claim: Government Ignores Published Scientific reports about aquaculture? The government and industry hide research from the public.

Province posts the conditions of new leases on-line. The federal government and the Canadian Aquaculture Association sponsor an on-line data base where over 1000 scholarly journal articles pertaining to salmon farming can be found. The Web site is:

<http://www.aquacultureassociation.ca/database/salmon>

SDC:

"Posting the conditions of new leases" has nothing to do with peer-reviewed science on open-pen aquaculture. And the existence of an online database sponsored by the industry tells us nothing about its contents. When we were preparing the film, we repeatedly asked government and industry to show us the science. They usually dodged the question as long as they could – and when they did comply, they never showed us the papers in the scientific bibliography compiled by Dr. Susanna Fuller on the subject. Dr. Fuller has made that compilation readily available to the industry and to government.

Here's what the film actually said:

"Despite the industry's denials, there's plenty of sound, published, peer-reviewed science on the shortcomings of net-cage aquaculture. Indeed, the Royal Society of Canada – the pre-eminent scientific organization in the country – recently published the report of an expert panel on the relationship between marine biodiversity and climate change, fisheries and aquaculture. Predictably, it identified the well-known problems with wastes, chemicals, disease, escapes and interbreeding.

"The chairman of the expert panel was Jeff Hutchings, professor of biology at Dalhousie University. I asked him specifically about the industry's repeated claims that there's no scientific evidence that

salmon feedlots adversely affect wild salmon." And Dr. Hutchings replied that "anybody moderately cognizant of the science that's been undertaken in this area cannot speak truthfully and make that statement."

PB:

The Community with the assistance of Dalhousie University uncovered the damaging effects of the fish farm in Port Mouton.

It's true that the Friends of Port Mouton conducted a research project in Port Mouton with the Assistance of Dr. Jon Grant a Professor of Oceanography at Dalhousie University. Dr. Grant strongly disagreed with the conclusions of the friends of Port Mouton. In fact he thought they completely misinterpreted the data he collected in an attempt to achieve their own goals. He was so frustrated that in February of 2012, he wrote the following letter to the Chronicle Herald.

I have been reading the debate on fish farming and feel compelled to respond. I am a researcher with 25 years of experience examining aquaculture-environment interactions. I have worked with government, industry and community groups, and published dozens of papers in scientific journals on this topic.

The newspaper is not the place to debate the scientific literature, and I find it tiresome that so many people are certain of "the truth." I will thus make only general comments.

First, one of the great pieces of misinformation surrounding this issue is that government regulators are somehow lax or irresponsible in the decision process.

Both federal and provincial governments spend countless hours and dollars examining methods of assessing sustainability in aquaculture. This occurs in field research on fish farms, computer modelling, and numerous meetings debating how results can shed light on improved monitoring and regulation. As a participant in these activities, I can verify the time investment.

Second, the doom scenarios surrounding fish farming are overstated.

There is no question that sediment beneath fish cages suffers from too much waste input, although this "footprint" is rarely much larger than the cage itself. In contrast, the ecosystem-wide effects of fish farming have seldom been demonstrated, partially because it is difficult to assess ecosystem-level properties, and partially because it is difficult to assign cause-effect to aquaculture as being responsible.

There are multiple efforts underway to decrease the impact of aquaculture on the environment at every level. These include improvements in husbandry as well as in monitoring.

Fish farming is a valid use of ocean resources, but citizens have a right to expect sustainability.

However, the debate must develop from evidence-based arguments rather than fear-mongering and rhetoric.

Jon Grant, PhD, lives in Halifax.

SDC:

The Friends of Port Mouton have asked me not to respond to Professor Grant, since they will be talking with him directly. I would only note that he has been an active supporter of the aquaculture industry on many occasions, and another of his letters to the Herald, intemperately attacking the scientific credibility of Dr. Alexandra Morton, drew the following reaction from one of his Dalhousie colleagues:

"I am writing in response to the Oct. 23 letter from Jon Grant, PhD, 'Beware of Facebook science.' Professor Grant should be aware that Alexandra Morton, PhD, was invited to the Maritimes to give the 5th Annual Ransom A. Myers' Lecture in Science and Society by Dalhousie University. Her topic was "Farmed Salmon vs. Wild: The role of government, scientists and citizens." This lectureship was

no doubt in recognition of her academic credentials and international reputation as a scientist; Dr. Morton's credentials and background clearly indicate she is far from 'a self-appointed saviour whose only goal is disruption.'

"As an academic myself, I am well aware of the need for scientists to disclose any real, potential or perceived conflicts of interest, particularly in relationships with industry, in our public statements and writings. These disclosures should include the receipt or intention to receive any support from industry, including honoraria, contracts and consulting fees. I hope that Professor Grant took this into consideration in submitting his letter.

Richard MacLachlan, MD, Halifax"

PB:

Claim: Gardner Pinfold set the economic value of wild salmon in Eastern Canada at \$150 million.

The province runs a salmon hatchery along the Margaree River for restocking purposes, and our aquaculture road map identifies that part of the province as unsuitable for open pen salmon farming. We wouldn't make any decisions that would impact wild salmon. Recently Snow Island Salmon withdrew one of its three applications along the Eastern Shore due to concerns raised about its proximity to a wild salmon run.

That being said, the study referenced was paid for by the Atlantic Salmon Federation. Federal numbers show the value of wild salmon in Atlantic Canada closer to \$62 million. Furthermore, the Gardner Pinfold study says that only \$10 million of that value is in Nova Scotia. In New Brunswick, Gardner Pinfold suggests the Wild Salmon industry is worth \$70 million dollars (the most in Eastern Canada). Incidentally, New Brunswick's farmed salmon industry has 100 farms and Nova Scotia has 12.

SDC:

I am shocked that the Member would impugn the integrity of Gardner Pinfold. If that consultancy lacks competence or integrity, why did the provincial government commission Gardner Pinfold to undertake a study of closed-containment fish farming? May we dismiss that study in advance on the basis that it is bound to defend the government's ill-considered policies?

The recreational fishery is much more important in New Brunswick than Nova Scotia because New Brunswick has a string of large, productive salmon rivers -- the Miramichi, the Restigouche, and several others -- flowing into the Gulf of St. Lawrence, which in winter is too cold for aquaculture. We have only one such river: the Margaree.

New Brunswick, like Nova Scotia, used to have a second set of productive salmon rivers flowing into the Bay of Fundy, most notably the Saint John. Since the advent of industrial net-pen aquaculture at the mouth of the Bay, salmon runs in all 38 Fundy rivers have collapsed, on both sides of the bay -- the same phenomenon that has occurred everywhere else in the world that such aquaculture has been established. The study that showed this, incidentally, was done by the late, legendary Ransom Myers, one of the greatest fisheries scientists of our time.

Claim: The salmon you buy is laced with antibiotics and dye.

Under extreme circumstances salmon are treated with antibiotics. However, the CFIA does not allow for the sale of farmed salmon containing antibiotics. In fact, salmon treated with antibiotics must remain in the water for several months before they can be processed to ensure no antibiotics are in their system.

The "dye" that turns salmon pink is not actually a dye. Salmon in the wild eat large amounts of

food that contain the compounds astaxanthin and canthaxanthin. That's what turns them pink. Farmed salmon don't get enough of these compounds naturally so they have to add it to their food. The additive, which Salmon Wars classifies as a dye is actually derived from things like mushrooms, carrots and sweet potatoes.

SDC:

"Extreme circumstances?" The World Wildlife Fund (WWF) commissioned a report from a committee of expert scientists – including a research scientist from Canada's own DFO – which reported that "...this use of large volumes of antibiotics can only be explained by excessive and prophylactic [preventative] use. Excessive and prophylactic use of antibiotics in animal husbandry is in general the result of shortcomings in rearing methods and hygienic conditions that favor animal stress, and opportunistic infections and their dissemination." In fairness, the committee did single out Chile and BC as venues where this is a particularly significant problem – but the heavy use of antibiotics is a common industry practice.

The Member doesn't mention pesticides like Slice, which are routinely included in salmon feed to repel sea lice. Certainly some kind of chemical is going into the salmon feed in the Annapolis Basin, though we don't know what. I refer again to the "Medicated" photograph above.

And a dye is a dye, however derived. The film says, "The flesh of farmed salmon is white, not salmon-coloured. It arrives in the supermarket salmon-coloured because it's had dye in its food." Alas, that is simply the truth. It may not bother some consumers. It will certainly bother others.