December 5, 2003

Watershed Talk

Volume VII
Issue 28

A weekly Aboriginal fisheries newsletter for fisheries representatives and their organizations

PACIFIC REGION PINK SALMON ACTION PLAN: FRESHWATER AND MARINE MONITORING PROJECTS

Although a hot topic earlier this year, the pink salmon – sea lice issue, has not been readily discussed within the Fraser recently. And for good reason. The Department committed to studying the issue this year, found some funding, and put staff into the field to take a look. I recently had a brief communication with Brent Hargreaves, the Marine Project leader, and was informed that data was still being reviewed, but an article could possibly be available as of January 2004. I will hold the Department to this, and try to get some further discussion on this topic. Meanwhile, Mr. Hargreaves directed me to the following website http://www-sci.pac.dfo-mpo.gc.ca/mehsd/sea_lice/pink_salmon_e.htm where weekly reports are available from the 2003 season regarding the Departments activities.

I will try to summarize progress to date with the aid of the above mentioned website.

Introduction (from the website)

The research study announced in DFO's Pink Salmon Action Plan in the Broughton Archipelago was initiated the week of March 3rd, with field crews installing screw traps in the study's rivers (KlinaKlini, Kakweiken and Glendale) and the marine crew initiating both deep water and beach seining in parts of the Archipelago from the research vessel, Walker Rock. Science crews will be in the field weekly until the end of May. The fish captured from both the freshwater and marine components will be sub-sampled and preserved for detailed analyses in DFO's fish health laboratory at the Pacific Biological Station (PBS). Fish samples will routinely be removed from the seining operations. The fish will be classified to species, and assessed visually for sea lice prevalence (percentage of juvenile salmon infected). It must be noted that these results are preliminary in nature, designed to allow those interested to follow the approximate migration of juvenile salmon from the rivers and through the Archipelago, along with a crude assessment of lice load. More sophisticated analyses will be published by the project leaders during the fall/winter of 2003/04 and beyond.

For the weeks of March 2 to the 7th of May, a freshwater downstream program was conducted on the Klina Klini, Kakweiken, Glendale and Devereux creeks, and monitored chinook, coho, pink, and chum fry migrations. Total catches, species compositions, size, and condition were all noted in the weekly reports. This information will be used to assess the "health" of the out-migrating salmon smolts from the spring of 2003. By conducting these surveys in what are hoped to be four important pink and chum systems in the Knight and Broughton, the claim that pinks were effectively "wiped out" in 2002 by sea lice can be assessed with the production of juveniles in 2003. The freshwater information can also provide baseline data useful to the marine studies, by allowing for such estimates as potential abundance of juveniles in the marine areas, mortality rates due to sea lice infection, and mortality rates due to other factors (i.e. predation). Adult escapements were also monitored in the freshwater areas in the fall of 2003.

The marine program operated from March 2 to the 12th of June, throughout the Broughton Archipelago and in Knight Inlet. In both areas, beach and deep water seines were used to capture juvenile salmon, the pinks being of highest priority, but sub-sampling occurring on all salmonids captured. As to the locations of sampling, I inquired as to why Knight Inlet was chosen for sampling (though I assumed it was a control) but was informed that it was sampled because it is directly connected to the Broughton, and that many juvenile salmon originating in Knight Inlet migrate out through Tribune Channel and into the Broughton. Fish sampled in the most inland portions of Knight Inlet are the most removed from

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the fish-farming industry in the region, but it is debatable that this could be considered a true control.

The following is a snapshot of data from the website.

Broughton	Percentage infected with Sealice (Beach Seine/Purse Seine)	
Week	% Pinks	% Chum
Mar 24-28	24	18
Mar 31-Apr 4	17	33
Apr 7-11	11/1.5	24/8
Apr 14-17	35/15	43/35
Apr 22-25	49/36	43
Apr 28-May 2	35	35
May 5-9	37	22
May 12-16	41/42	48/67
May 19-23	41/50	64/66
May 26-30	29/5	12/20
June 2-6	46/10	46/6
June 9-12	47/32	42/46

Knight	Percentage infected with Sealice (Beach Seine/Purse Seine)	
	% Pinks	% Chum
Mar 24-28	5	8
Mar 31-Apr 4	15	16
Apr 7-11	12	11
Apr 14-17	0	16
Apr 22-25	21	12
Apr 28-May 2	15	28
May 5-9	12.5/6.6	12/7.5
May 12-16	18/18	26/24
May 19-23	3/19	18/16
May 26-30	13/5	7/13
June 2-6	30/9	30/11
June 9-12	34/33	45/39

It is not prudent to draw any conclusions from this data, which may be incomplete or might even contain errors. It does, however, start to paint a picture of the results. What is not identified within the context of this web site summary, is an "acceptable" or "natural" rate of sea lice infection of juvenile salmonids. We will have to keep this question in mind as the results are released, for without a frame of reference the results will have little meaning, particularly as it applies to the rates of infection and mortality, and whether or not it is "normal".

The following paragraph (taken from the aforementioned web site) describes some additional sea lice life history/biology research which was undertaken in the spring of 2003.

Biological Oceanographer Dave Mackas and technician Moira Galbraith (DFO Science Branch employees) have undertaken a DFO-funded study, the objective of which is to understand the spatial and temporal distribution of the planktonic stages of sea lice in the Broughton Archipelago. Moira spent the weeks of April 27th, and May 12th and 26th sampling various sites, but has found only a few planktonic stages. A full report of her work will be available on this web page about mid-September.

Though I have little other information, please feel free to contact me regarding questions you may have. If nothing else, I can pass them along. ***For further information, contact Jason Yarmish at (250) 962-2712 or jasonyar@telus.net***

UPCOMING MEETINGS

January 6-7/04: Fraser Sockeye Longterm Escapement Initiative Workshop #4. Details to Follow.

January 22/04: *10:00 am* – Fraser Tier 1, at the SFC offices, located at 274-A Halston Connector Road in Kamloops. *Please confirm attendance by January 15, 2004. If you have any agenda items for the Tier 1 meeting please submit by January 9, 2004.*

January 23/04: FWAFF (Tier 2), in the Ponderosa room at the Days Inn Kamloops, located at 1285 West Trans Canada Highway. The room rate for single is $74.00 + taxes and includes a hot breakfast. ***To book your room, contact the Days Inn at (250) 374-5911.*** Participants are responsible for their own accommodations and travel. ***Please confirm your attendance by January 15, 2004 with Denise Gurney at info@frafs.ca or at (250) 828-2178***

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