From:	Johnson, Stewart
Sent:	Tuesday, November 3, 2009 3:45 PM
To:	Tompkins, Arlene <Arlene.Tompkins@dfo-mpo.gc.ca>; Saunders, Mark <Mark.Saunders@dfo-mpo.gc.ca>; Jones, Simon <Simon.Jones@dfo-mpo.gc.ca>; Garver, Kyle <Kyle.Garver@dfo-mpo.gc.ca>
Subject:	FW: brief summary needed related to Sx response

Good afternoon,

There are 157 case reports for Fraser River sockeye salmon in the Fish Health Database. These are for fish collected in a variety of watersheds and hatcheries throughout the Fraser drainage for a variety of reasons (e.g. mortality event, screening for transplant etc.). These records start in 1975 but are not completely up to date as there have been delays in entering data for the last few years. Numbers of fish tested and the proportion that were positive for a particular agent are only available for cases starting in 1999. Most of these cases were examined for the presence or absence of specific pathogens depending on the reason for testing. Therefore they do not provide a general survey of the types and numbers of pathogens present. There are other difficulties with the database and how these data are reported (e.g. pooling of individuals etc.) which together make it difficult to understand the overall health status and pathogen prevalence of sockeye.

There has been some routine monitoring for culturable-viruses. Culturable-viruses are those that will grow on the cell lines that we use for virus assays. It is possible that they may be some viruses present that do not culture. This work was started by Garth Traxler nearly 30 years ago and it is presently being conducted by Kyle Garver. The majority of this survey has been done on fish from Weaver Creek and Nadina Lake. As part of this is a long term monitoring effort they have been discovered previously unidentified pathogens such as the ciliate *Ichthyophihirus multifilus* and to document effects of pathogens on particular populations. Additionally molecular epidemiological studies on endemic viral pathogens, such as IHNV, have provided insights into viral traffic patterns and evolution of viruses within sockeye populations.

In addition to these data Garth Traxler has assembled a large data set which was used to try to correlate presence of pathogens with survival/ escapement etc. He is presently working on this project.

Over the period of 2001-2005 Simon Jones examined a variety of Fraser River stocks for the presence of *Parvicapsula* sp. in kidney by histologyand PCR. During these studies other pathogens present in kidney tissues were also noted. These data are available in a series of publications authored by Simon.

Thank you Kyle and Simon for helping with this.

Stewart

Dr. Stewart C. Johnson
Head, Aquatic Animal Health
Fisheries and Oceans Canada
Pacific Biological Station
3190 Hammond Bay Rd, Nanaimo, BC, V9T 6N7
Tel: 250-756-7077
Fax: 250-756-7053
Email: Stewart.Johnson@dfo-mpo.gc.ca

From: Garver, Kyle
Sent: November 2, 2009 7:28 PM
To: Johnson, Stewart
Subject: FW: brief summary needed related to Sx response
Importance: High

Hi Stewart,
Welcome back!
Arlene is needing some information (see below). Here are some thoughts I had towards the fish health efforts.

One routine monitoring program that is occurring in the AAH section is the work that Garth started nearly 30 years ago and I've since continued. In this effort, we are surveying lower and upper Fraser sockeye stocks for the presence of culturable viruses. Because this is a long term monitoring effort we have been able to discover new emerging diseases (i.e.Ichtophonius) as well as document effects of pathogens on particular populations. Additionally molecular epidemiological studies on endemic viral pathogens, such as IHNV, have provided insights into viral traffic patterns and evolution of these pathogen within sockeye populations.

Other monitoring efforts occurring in AAH is through disease investigations of mortality events occurring in enhancement facilities or in wild fish populations. Although most of the samples investigated are mortality events, the diagnostic lab may do routine screening of particular salmonid stocks for BKD. Because the AAH section has been performing diagnostics for DFO enhancement facilities for a long time there will be some historical knowledge on disease status of various stocks.

I'm available Tuesday AM if you would like to discuss. Seems like Arlene would like a quick response.

Cheers,
Kyle
-----Original Message-----
From: Tompkins, Arlene
Sent: November 2, 2009 3:25 PM
To: Garver, Kyle
Subject: FW: brief summary needed related to Sx response
Importance: High

Please forward to Stuart as well, I am having problems with address book

---

From: Tompkins, Arlene
Sent: Mon 02/11/2009 3:24 PM
To: Garver, Kyle
Subject: brief summary needed related to Sx response

Stuart / Kyle

I am working with Mark to prepare a response to Fraser SX, I need a **short** paragraph on ongoing DFO programs, specifically work your section is doing to monitor disease in salmon (not just aquaculture related).
Appreciate a short turn around.
Thanks Arlene