Letter from Jeff Burrows Senior Fish Biologist - BC Forests Lands & Natural Resource Operations Kootenays – Nelson to the BCWF Inland Fisheries Committee Regarding IHN Virus in Kootenay Lake Kokanee

Here is a link to a slightly more complete story: ***http://boundarysentinel.com/news/fish-virus-found-kootenay-lake-kokanee-calls-action-28084***

There is very little the public and anglers can do about the IHN virus in Kootenay Lake. We don't know where the virus came from – could have been introduced by a migrating animal (duck, eagle, bear...), could have been present from time to time undetected only to flare up for an unknown reason last fall, or introduced by a person/boat (I doubt this) but I'll draw your attention to p. 83 of the current fishing regulations which has a short essay on what anybody can do to avoid transporting and transplanting unwanted organisms – boils down to cleaning and drying boats trailers and gear.

More about this situation:

During monitoring of last fall's kokanee spawners, fish hatchery staff detected Infectious Hematopoietic Necrosis (IHN) virus at Meadow Creek. The virus was then checked for and confirmed at Redfish Creek and the Lardeau River, also Kootenay Lake stocks. Also checked and virus-free were the Hill Creek Spawning channel (Arrow Lake), and Norbury Creek (upper Kootenay River), near Cranbrook.

IHN is not harmful to humans, and cannot be transferred to humans by either touching or eating infected fish. The IHN virus is fairly common disease in rainbow trout as well as various salmon species including coho, chinook, and sockeye. While IHN is not as harmful to adult fish, it can affect the survivability of newly hatched fish or juveniles (fry).

All these channels are managed by FLNRO, with funds provided by BC Hydro's Fish and Wildlife Compensation Program (FWCP) or the Habitat Conservation Trust Fund (HCTF). Since kokanee are an important food fish for other sport fish such as bull trout and rainbow trout, the virus has the ability to spread to those populations as well (but may not have). We intend to check Gerrard rainbows this spring. Although their spawning numbers have been high the past four years, their Gerrard rainbow densities are still lower when spawning, than kokanee.
In 15-20 years of monitoring it has not shown up in Kootenay Lake kokanee until this year. The infection was abundant, occurring in 16 of the 20 batches of fish tested, or 80 per cent. Spawning channels are obviously specifically designed to attract kokanee salmon during spawning season, so densities of fish are high, making for easy transfer of the infection. Eggs are cleaned following extraction for hatchery use and the virus was not found within the fertilized eggs. However, as a precaution all the eggs from the infected populations were discarded. Eggs will not be collected from the infected sites for several years as a precaution, but instead obtained in other kokanee spawning areas free of the virus, like Norbury and Hill

Creeks. This is important because kokanee support many angler days in stocked fisheries elsewhere in BC.

It is good news that the eggs were not infected. Also, the infected kokanee showed no external symptoms, and spawned successfully before dying. Fry incubating now, to emerge this spring, may be vulnerable on emergence or when emigrating to the lake to any residual virus present. We undertook actions to help prevent the spread of the disease: last fall we increased the rate of flow through the spawning channels, creating a flushing or rinsing action that should have helped clear virus-contaminated debris out from around the eggs and spawning channel gravel. We removed carcasses of spawned kokanee out of the channels, something we never do otherwise. We expect to modify routine techniques for cleaning the gravel in the summer months, to add drying the gravel, to kill as much remaining virus as possible. Monitoring of fry this spring and kokanee spawners this fall, and same in future years, will tell us if IHN remains and we need to be more aggressive.

But at this time I think other factors are likelier to influence sport fishing than IHN – for example we have likely had a mismatch in predator-prey ratio in Kootenay Lake. Although we ran Meadow at very high fry production rates, there still may not have been enough kokanee supply for Gerrard rainbow and other predators over the last few years. That sort of scenario will sort itself out over time. For example last fall's kokanee run to Meadow was 200,000 (roughly), from a fry cohort that was 18 million strong in spring 2010. Those numbers are low for a Meadow run, but not unprecedented. The rest were eaten over those 3 years. In response, the adult kokanee were among the biggest ever measured at Meadow Creek (they grew better with less competition for zooplankton from their buddies that were eaten...). And the females had more eggs.

Hopefully that answers some questions.

Regards

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