



Lho Dustl'us— Sturgeon Issue

Carrier Sekani
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Sturgeon Spawn Monitoring

CSTC were funded to conduct a spawn monitoring project in 2012. **Radio tagged** sturgeon were monitored throughout the Nechako to detect their approach to their known spawning grounds near Vanderhoof. Monitoring started on May 8 and on May 17th fish had moved above rkm 131 rkm (into the spawning reach). By May 21, six fish were located above rkm 131. The majority of fish came to the spawning grounds on the 30 - 31st May.

Detections of radio tagged fish within the spawning reach was used to determine when egg mats would be deployed.

Egg Mats: CSTC staff set out a series of large and small mats above and below the Burrard St. bridge (84 mats). The mats are placed throughout the spawning reach in areas where sturgeon spawning has been documented, including where gravel pads were placed.

Many eggs were collected this year; more than in previous years - 1,890 eggs in total. The majority of eggs were collected below the bridge (1,422 eggs). All eggs had silt or sand on them; however one large larva was found and some eggs were seen hatching on the

mats.

The developmental stage of the eggs at the time of their collection is used to determine (with a high degree of accuracy) when they were fertilized - i.e. when spawning occurred. The eggs collected indicated that there were several spawning events in 2012.

Drift Sampling-Larvae: Drift nets are targeted to be in the water 10 -14 days post-spawning (when eggs are expected to hatch).

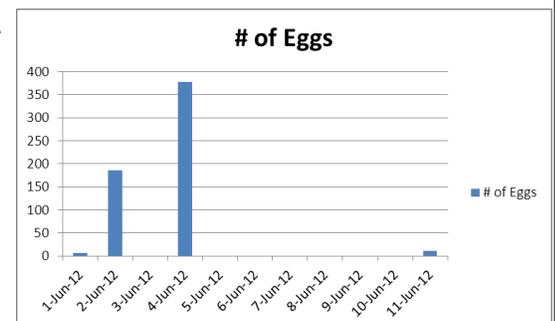
The first larvae were found on June 12. Monitoring was extended to July 9th because staff continued to find larvae throughout June into early July. In total 15 larvae were collected. None of larvae were older than 3 or 4 days, indicating there was a spawning event in late June.

The capture of eggs and larvae downstream of the bridge could suggest that the gravel pad laid above the bridge in 2011 attracted spawners and facilitated egg-larval hatching.

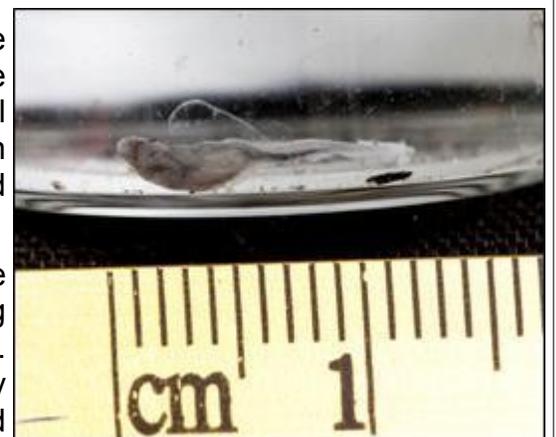
A key finding in 2012 was the documentation of spawning later than previously observed. Spawning activity was largely observed from the Burrard Street bridge downstream. We had not intensively monitored that area previously.



Sturgeon eggs found on the mats.



Sturgeon eggs found on egg mats. Each peak suggests a separate spawning event.



A sturgeon larvae found in fyke nets.

Photo: Wayne Carlton



Field crew Left to right: Neil Heron (Stellako), William (Bill) Mole (Saik'uz) and Ashley Raphael (Saik'uz).

Adult Sturgeon Radio tagging

Radio tags have a limited battery life, and the CSTC crew attempted to capture and replace tags in adult sturgeon last fall (Sept 21- October 10, 2012) - as time allowed. Adults were caught using set lines and by angling. A total of 16 Sturgeon were caught. Of those 13 met the criteria for a new radio tag.

Adult sturgeon with actively signaling radio tags are important for allowing ongoing research efforts into spawning behavior and spawning habitat

selection. They also allow the monitoring of tagged fish's movements throughout the Nechako River and watershed to provide a better understanding of seasonal movement patterns and the range of the population. The fish can be tracked by boat and air using mobile receivers. There are also several stationary receivers that keep an ongoing record of tags detected. These are downloaded throughout the year to help monitor movement patterns.



Measuring length and girth of an adult sturgeon.



Left to right; Neil Heron and Chris Pharness on the Nechako river with an Adult White



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Juvenile Sturgeon Monitoring

Sampling to monitor the Nechako's juvenile sturgeon population took place between Sept 20 - October 10, 2012. Setlines with fine-wire circle hooks were used. A total of 26,300 hook-hours of effort were applied and a total 27 sturgeon were captured (28 captures; 1 individual captured twice during the project).

The 27 individuals captured included 6 juveniles that were of hatchery origin, and 21 wild-born individuals, including 8 wild born sturgeon that had been captured in previous sampling programs, and 13 wild-born sturgeon that had not been previously captured. The total lengths of the 27 fish

captured ranged from 50.5cm to 94cm. There were three sites that produced the bulk of the captured sturgeon; River km (rkm) 125 (6 fish), rkm117 (7 fish), and rkm111 (8 fish). River km 0 is at the junction of the Nechako and Fraser River. Vanderhoof is rKm137.

Ages of the fish captured range from 3-17 years and indicated a slight increase in wild births from 2007, which was a high-water year.



Juvenile Sturgeon are defined as being less than 1meter long.



Right; Locations of drift nets, below the Burrard Street Bridge in Vanderhoof.

Map produced by M Flannery, CSTC

Left; The tedious job of sorting through a drift net sample for larva.



Neil Heron, our new Senior Fisheries technician

By Christina Ciesielski



Our previous Sr. technician (Jim Webb) accepted a job in Kitsumkalum in October 2011. A hiring process was completed in April 2012 and the position was offered to the successful candidate but they were unable to accept the offer. The job was posted again in

December 2012 and Neil Heron from Stellat'en First Nation was the successful candidate.

Neil accepted the position in January 2013. Neil has worked in fisheries for over 7 years. You can contact Neil at the warehouse in Vanderhoof.



Reducing harm to Sturgeon encountered during FSC salmon fishing in Saik'uz First Nation and Nakazdli.

FSC Catch monitors were hired for Saikuz and Nakazdli. These monitors speak with fishers throughout the fishing season



Sturgeon Emergency release boat kit.

(July-Sept) Their job is to collect

Photo: Christina Ciesielski

numbers of Sockeye and Chinook both caught and released, and Sturgeon unintentionally caught in gill nets. Actual names of fishers are not sent to DFO; only date, time amount and type of fish caught. Collecting these numbers helps CSTC to advocate for First Nations when dealing with DFO and their management plans in the off season (Nov-March). It is very important that people continue to fish and spend time on their Keyoh. This helps prove First Nations are still using the resource (even at low numbers) and can show the decline in catch numbers year to year. DFO needs to be reminded that fish are extremely valuable to Dakelh and Sekani culture and

as a food source.

All catch monitors have emergency release boat kits and are available to help remove a sturgeon from a net. They have forms to fill out every time a sturgeon is encountered.

In 2012, Tlazt'en fishers encountered 7 sturgeon. One sturgeon was dead when found in the net. The rest were released unharmed. Takla encountered one sturgeon (dead) and reported this to Cora (Sturgeon Outreach).

Saikuz encountered one sturgeon at Wedgewood and released it. Please contact your catch Monitor or CSTC when you encounter a sturgeon. Mussi

Sturgeon Outreach and Harm reduction

This year the Nechako White Sturgeon recovery Initiative (NWSRI) Community Working Group (CWG) decided to attend two Rivers Day events. In Prince George September 21 and



Display at Vanderhoof Rivers day
September 30, 2012.

Vanderhoof Sept 30, 2012. Both events were well attended.

School presentations were held in several grade 3-5 classes in school district 91 between January- March , 2013. This year a large fabric stuffed sturgeon model was made available for presentations. The Emergency release boat kit video was also shown and discussed. Two community meetings were held in Takla Lake and Stellako. It has become increasingly difficult to attract community members to these meetings. This is an issue that the NWSRI Community working Group will address prior

to the November proposal deadline. Once again Cora McIntosh was hired to organize and deliver all the presentations.



Cora McIntosh, Saikuz member and outreach coordinator.

Photo: Christina Ciesielski