

CHINOOK DNA SAMPLING PROJECT
PORCUPINE RIVER: OLD CROW 2007

FINAL REPORT: August 24, 2007

By

Heather Barnfield
Community Steward – Old Crow

CHINOOK DNA SAMPLING PROJECT PORCUPINE RIVER: OLD CROW 2007

Purpose:

- Collect aggregate DNA samples of Chinook salmon in the Porcupine River from subsistence fishers in the Old Crow area and provide those samples to DFO for analysis and archiving.
- Increase the Chinook salmon DNA baseline data for the Yukon River basin.
- Assist regional managers in the long term to differentiate Porcupine River Chinook salmon from other Chinook stocks in the Yukon River basin.
- To increase community capacity and stewardship for the conservation and restoration of salmon stocks in the Porcupine River.

Introduction:

The Porcupine River watershed is home to a small run of Chinook salmon. In the past there has been some scientific data as well local traditional knowledge collected regarding run timing and spawning destinations of these salmon. Local traditional knowledge of the Vuntut Gwitchin People shows that Chinook salmon in the Porcupine River have always been harvested by the people of Old Crow as a subsistence food fishery. The harvest numbers vary from year to year, with an average annual catch of 280 fish over the past ten years. The largest catch was in 1997 when 811 Chinook were harvested, and the lowest catch was in 2000 when only 50 fish were harvested. The Chinook salmon in the Porcupine river are considered to be an important source of food for the people of Old Crow, and there is a great interest within the community to increase management efforts for these fish to ensure that they will be available for harvest by future generations of Gwitchin people. To date very little DNA has been collected from Porcupine River Chinook salmon stocks. This would be the first time a project has been developed to specifically collect DNA data from adult Chinook salmon in the Porcupine River. This project would also assist regional managers in the long term to differentiate Porcupine River Chinook salmon from other Chinook stocks in the Yukon River basin, and to increase community capacity and stewardship for the conservation and restoration of salmon stocks in the Porcupine River.

Methods:

Beginning July 10, 2007, I began contacting fishers in the village of Old Crow. At this time, I also put a commercial on CHON FM announcing the Chinook DNA Sampling Project and that fishers could come by the RRC (Renewable Resource Council) office to pick up the sample bottles. I also put notices up at the Northern Store, VGG (Vuntut Gwitchin government), and the RRC office.

The message on CHON FM and the notices that were put up in the community did not attract the interest of the fishers. It was necessary for me to approach individuals at their homes to discuss the project.

Some of the fishers found it difficult to understand what the axillary appendage is. The photocopy of the salmon that was sent for the project was difficult to interpret. I explained that the axillary appendage is a small fin above the pelvic fin running alongside the body of the fish. I was able to show a couple of the fishers what the axillary appendage was on a dead fish. This helped immensely.

Results:

Unfortunately, one of the fishers misunderstood the directions and cut the pelvic fin off. He apparently caught 90 Chinook before contacting me to ask what part of the fish to take.

Regrettably, another person did not follow the instructions and put pairs of samples in one bottle instead of one appendage in one bottle and one in the other.

A total of 170 samples were caught – 85 usable samples and 85 unusable samples. Please refer to Table 1 and Table 2.

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PAYMENT FOR FISHERS		
Name of Fisher	# of Samples (\$5 / Sample)	Amount of Payment
1. Dennis Frost Sr.	5	\$25
2. Harold Frost	3	\$15
3. Shawn Bruce	8	\$40
4. Kenny Tetlich	1	\$5
5. Georgie Moses	16	\$80
6. Robert Kaye	17	\$85
7. Joe Tetlich	30	\$150
8. Peter Frost	5	Does Not Want to be Paid
9. George Nukon	?	\$0

Table 1

TOTAL # of Usable Samples.....85
 TOTAL Payment for Samples.....\$400.00

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FOLLOWING FISHERS DO NOT RECEIVE PAYMENT FOR SAMPLES			
Name of Fisher	# of Samples (\$5 / Sample)	Amount of Payment	Comments
1. Stephen Frost Sr.	34	0	Not collected properly – pairs of samples put in one bottle instead of one in each bottle
2. Joe Tetlich	34 in one bottle, 45 in second bottle – a total of 39 pairs	0	Uneven amount of samples in second set of bottles
3. Earl Benjamin	12	0	Moving – wife threw out samples

Table 2

TOTAL # of Unusable Samples..85

TOTAL Payment for Unusable Samples.....0

Total # of Chinook salmon samples (usable and unusable).....170

Evaluation:

Overall, I think the project went well, but it definitely could benefit with some changes for next year.

Future Recommendations:

Now that there is a list of fishers, that I have compiled (Appendix One), I would suggest personal contact by phone and door-to-door contact to initially inform fishers of the project. Also, I suggest a pamphlet be put in the fishers' mailboxes outlining the project and a date for a public meeting for both the community and the fishers involved.

At the meeting the sample bottles could be handed out with a detailed explanation of the project, and an explanation of where the axillary appendage is located. I highly suggest a fish model be used as a visual aid. I also have kept four axillary appendages as an example for next year. Regrettably, due to the delayed start of the project, there was insufficient time to organize a 'fishers' meeting.

The initial plan was to travel the Porcupine River, at least twice, to approach and assist fishers. This would have been extremely helpful, but unfortunately, timing conflicts and weather conditions prevented river travel from occurring. I strongly recommend that this component of the Chinook DNA sampling project be carried through for any future

APPENDIX ONE

NAMES OF FISHERS TO BE CONTACTED FOR NEXT YEAR (2008) FOR THE CHINOOK DNA SAMPLING PROJECT

1. Dennis Frost Sr.
2. Stephen Frost Sr.
3. Peter Frost
4. Harold Frost
5. Shawn Bruce
6. Kenny Tetlich
7. Georgie Moses
8. Robert Kaye
9. Joe Tetlilchi
10. Billy Bruce
11. Roger Kaye
12. Dugie Charlie
13. Phillip Rispin
14. Joseph Kaye
15. Marvin Frost
16. Carlos Foster
17. Freddie Frost
18. Lawrence Lord

endeavors, as it would greatly enhance the success of the project. This way the Community Steward would have the opportunity to prevent misunderstandings such as those previously mentioned in this report.

It would also be a good idea to meet with the Game Guardian so that he/she is in the loop as to how the project should be conducted and could then act as a liason.

Also, it is important to have the finances in order before the collection of samples. As this was the first year and people were away this summer, it was very difficult to get this part of the project up and running until the samples were collected. I stress this point as some of the fishers are wishing to be paid and we are not ready to do so.

For similar projects in the future, it is not necessary to send dog nail clippers as the fishers prefer to use a knife to cut off the axillary appendages.

Also, I think a one- page information sheet, like the one that was sent this year, is a good idea, but it may be best to print the instructions in a larger font (maybe 20) so it stands out more clearly. It may be a good idea to have a diagram of the two sample bottles showing a pair of axillary appendages above the bottles with a picture of one appendage being put in one sample bottle (visibly labeled 1) and the other axillary appendage being put into the second sample bottle (visibly labeled 2). Visual aids tend to work very well with most people.

Conclusions:

I think this would be a good project to continue in the future, as there is interest within the community and some of the 'bugs' have been ironed out. I believe that a more timely start to the project would have benefited the outcome of the Chinook DNA sampling project.