From Source to Sea: Paddling the Back River

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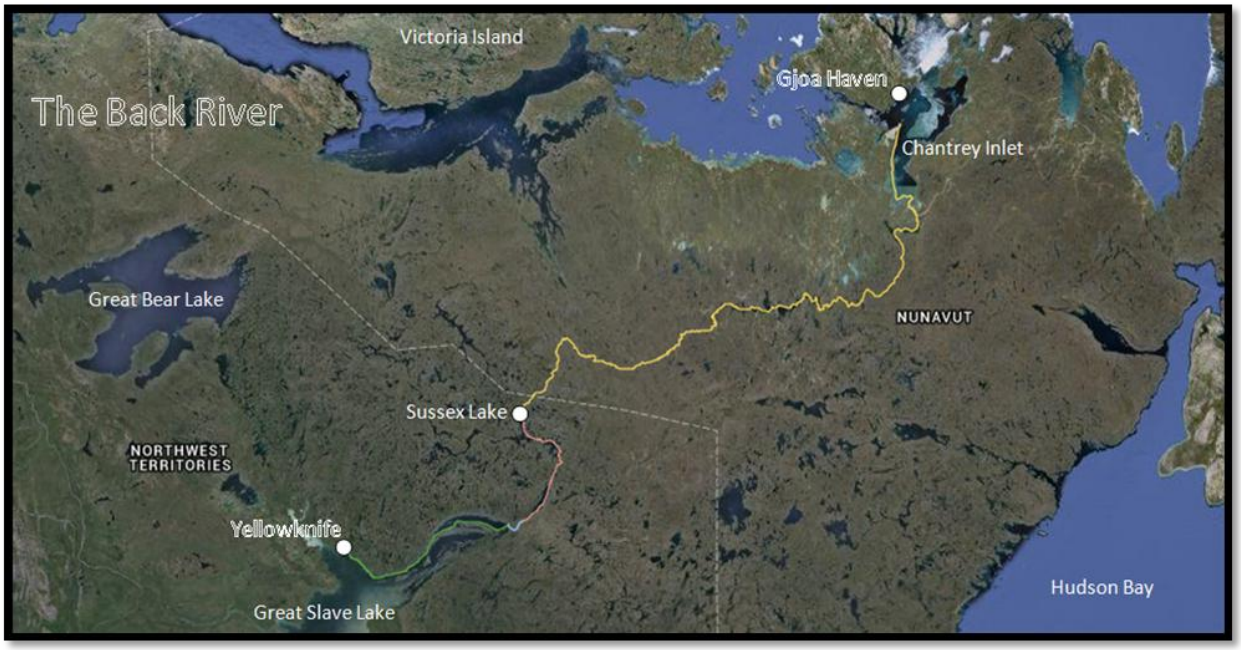
Itinerary

Our proposed route outlined in yellow spans through the Northwest Territories and Nunavut.



A closer look at our route on the Back River (yellow) that shows our start in Yellowknife on Great Slave Lake (green) to the headwaters on Sussex Lake via the historic Pikes Portage (light blue) and Lockhart River (pink) to the trips end in Chantrey Inlet.

Updated Itinerary

DAY		DATE	LOCATION
	20	June	Arrive in Yellowknife
	21	June	Yellowknife
0	22	June	Start Paddling from Yellowknife
1	23	June	Great Slave Lake
2	24	June	Great Slave Lake
3	25	June	Great Slave Lake
4	26	June	Great Slave Lake
5	27	June	Great Slave Lake
6	28	June	*Weather Day*
7	29	June	Great Slave Lake
8	30	June	Great Slave Lake
9	1	July	Great Slave Lake
10	2	July	Great Slave Lake
11	3	July	Great Slave Lake
12	4	July	Great Slave Lake
13	5	July	Pikes Portage
14	6	July	Pikes Portage
15	7	July	Pikes Portage
16	8	July	Lockhart River
17	9	July	Lockhart River
18	10	July	Lockhart River
19	11	July	Lockhart River
20	12	July	Lockhart River
21	13	July	*Weather Day*
22	14	July	Resupply at Aylmer Lake
23	15	July	Lockhart River
24	16	July	Lockhart River
25	17	July	Lockhart River
26	18	July	Sussex Lake (Back River)
27	19	July	Muskox Lake (Back River)
28	20	July	Back River
29	21	July	*Weather Day*
30	22	July	Back River
31	23	July	Back River
32	24	July	Back River
33	25	July	Beechey Lake
34	26	July	Back River
35	27	July	Back River
36	28	July	Back River
37	29	July	Back River
38	30	July	Back River
39	31	July	*Weather Day*
40	1	August	Back River
41	2	August	Back River
42	3	August	Back River
43	4	August	Pelly Lake
44	5	August	Pelly Lake
45	6	August	Garry Lake
46	7	August	Garry Lake
47	8	August	Garry Lake
48	9	August	Garry Lake
49	10	August	*Weather Day*
50	11	August	Back River
51	12	August	Back River
52	13	August	Back River
53	14	August	Back River
54	15	August	Back River
55	16	August	Back River
56	17	August	Back River
57	18	August	Back River
58	19	August	*Weather Day*
59	20	August	Back River
60	21	August	Back River
61	22	August	Back River
62	23	August	Chantrey Inlet
63	24	August	*Weather Day*
64	25	August	Boat Pick Up
65	26	August	Boat Pick Up
66	27	August	Boat Pick Up
67	28	August	Gjoa Haven
68	29	August	Fly to Yellowknife
69	30	August	Yellowknife
70	31	August	Drive to Spokane
	1	September	Drive to Spokane
	2	September	Drive to Spokane
	3	September	Drive to Spokane

The itinerary we have proposed is subject to change with the ice melt on Great Slave Lake. We have created a flexible schedule for June so that if the ice melt is occurring early we can get on the water earlier to maximize our time on the Back River. However, if the ice melt occurs later than expected we have proposed a cut-off date of June 27. If the ice still persists on Great Slave Lake by June 27, we will charter a floatplane to drop us off closer to the headwaters of the Back River. The cost will be comparable to the cost of our resupply, and in the event of a float plane drop off we would forgo a resupply. You will also notice that we will have a boat pick up once we reach Chantrey Inlet around August 25. This is to avoid several 5-15 mile open ocean crossings that would prove quite risky. We will be communicating with our contact in Gjoa Haven our last few days to choose our exact pick-up location. We have also updated our google map here:
https://www.google.com/maps/d/edit?hl=en&authuser=0&mid=zCqEJv70EnmI.k3ZKsnbWVWFQ

Agenda

Our primary goal remains similar to that in our initial proposal. Our objective is to canoe from Great Slave Lake in Canada, down the Back River to the Inuit village of Gjoa Haven at Chantry Inlet on the Arctic Ocean. This route will cover over 1,000 river miles, and require 50-55 days of paddling in order to complete. We aim to complete this route safely, and in good time.

While completing this route is a feather in the cap of any canoeist, our hope is that the ripples of this trip extend far past the two months we intend to travel on the Back River. We are planning to collect data observing potential impacts climate change may be having on the tundra, and creating a baseline to illustrate the current state of a pre-mined Back River watershed.

1) Observing the Effects of Climate Change:

As it pertains to arctic watersheds, a 2008 Environment Canada report showed that the ice-free season on many Canadian water bodies started growing longer in the 1970s, an important indicator of the rate of climate change in Canada. We look forward to further contributing to this already great wealth of knowledge.

Specifically we intend to primarily gather phenology data regarding:

- Local plant phenology (what plants are in bloom and when)
- Average air and water temperature
- Flow rate of the Back River and major tributaries
- Distribution and abundance of keystone terrestrial wildlife (specifically caribou and muskox)
- Time line of “the thaw” (melting ice, snow drifts, and permafrost on tundra)

We will contribute the information we gather to NatureWatch (Canada's version of the National Phenology Network), who have collaborated with and support Universities and other climate

research laboratories in order to understand changing conditions in Canada's far north.

2) <u>Addressing the proposed Gold Mine on the Back River:</u>

The Back River Project is currently in the advanced exploration and permitting stage, it is expected to begin mining in 2019 and continue for 20-30 years. The Sabina company has already submitted a Project Feasibility Study (PFS) and Draft Environmental Impact Statement to the Nunavut Impact Review Board (NIRB). The general conclusion of these studies is that the project should have no long term impact to local terrestrial and aquatic wildlife, freshwater and fish habitat, air quality, soil, and marine environments. While this may be, we have trepidations about a multi-decade open pit mining project that anticipates processing 5,000 tones/day of gold ore, constructing a cyanide leaching unit, and multiple large scale tailing ponds.[3]

Our goal with this trip would not to necessarily bring an end to or disrupt the progress of the Back River Project, but to create more awareness of the project; scientifically and environmentally. We intend to share our data and observations directly with the Sabina Gold & Silver Corp. and utilize our findings as a conversation starter, with the aim of this conversation centering on ensuring that the Back River remain untrammeled by man after the proposed project is finished. We would expect Sabina to manage the project in such a way that we could revisit the Back River in 20-30 years from now and find it relatively unchanged and remaining as suitable habitat for avian, aquatic, and terrestrial wildlife. The baseline data we intend to collect would be crucial in order to monitor and/or determine any long term change in the Back River watershed.

In terms of understanding the current status of the Back River watershed, we intend to gather a large set of water quality data. Specifically, we will monitor:

- Dissolved Oxygen (mg/L)
- Turbidity (Nephelometric Turbidity Units)
- Temperature (degrees Celsius)
- pH

We intend to utilize sampling protocol that is accurate and efficient. On average we will paddle 20-25 miles per day, which will include scouting and portaging challenging rapids. Clearly our time will be limited, so we aim to monitor in a way that allows us to gather the maximum amount of aquatic data as efficiently as possible.

We intend to gather data using a YSI 550a Water Quality Monitoring Meter, which can measure the above parameters simultaneously.

3 Source: Back River Project Draft Environmental Impact Statement. December 2013. Pg. 3

Our goal is to monitor changes and trends along the Back River watershed, so we plan to sample the river every 20 miles (roughly once per day).

Trip Costs and Gear List

	Gear	Acquired?	Cost ($)
Canoe	Pak-Boat	yes	---
	Pak-Boat Sprayskirt	yes	---
	Painter lines (2)	no	15
	Seth touring Paddle	yes	---
	Seth WW Paddle	yes	100
	Julie touring Paddle	yes	---
	Julie WW Paddle	no	*100*
	Throwrope (2)	yes	---
	Zipties	no	5
	PFDs (2)	yes	---
	Gear	**Acquired?**	**Cost ($)**
Repair/Misc.	Pak-boat Repair kit	yes	---
	Tent/Sleeping pad repair	no	?
	Other repair?	no	?
	Extra tent stakes	no	*5*
	Caribeaners (rigging)	yes/no	15
	P-cord (misc + rigging)	yes/no	5
	Water purification	no	10
	Solar	no	---
	Write in rain (data)	no	10
	First Aid kit	yes	---
	(Prescriptions)	no	30
	Camera	Yes	---
	Head lamp	yes	---
	Extra batteries	no	10
	Watch	no	25
	Journals	no	15
	YSI	yes	---
	Gear	**Acquired?**	**Cost ($)**
Personal Hygeine	Eye drops	no	3
	Soap	no	5
	Toilet paper	no	5
	Babywipes	no	5
	Trail towels (2)	no	45

	Lotion	yes	---
	Sun lotion	no	10
	Bug Spray	no	15
	Gear	**Acquired?**	**Cost ($)**
	Bug Shirts (2)	no	160
	Headnets (2)	no	45
	Underwear	yes	---
	Socks (4 pair)	yes	---
	Rain Jacket	yes	---
	Rain Pants	yes	---
	Hiking boots (dry)	yes	---
	Crocks (dry)	no	---
	Chotas (2, wet)	no	250
	Long Underwear (thin)	yes	---
	Long Und. (med)	yes	---
Clothing	Long Und. (thick)	yes	---
	Fleece top	yes	---
	Fleece pants	yes	---
	Hiking Pants	yes	---
	Carhartts	yes	---
	Puffy	yes	---
	Dry pants	no	---
	In-camp gloves	yes	---
	Glove liners	no	20
	Paddling gloves	yes	---
	Neck Warmer	yes	---
	Sun Hat	yes	---
	Warm Hat	yes	---
	Gear	**Acquired?**	**Cost ($)**
	Sleeping bags	yes	---
	Sleeping liner	yes	---
Tent Gear	Tent	yes	---
	Footprint	?	?
	Trail pillow (2)	no	50
	Gear	**Acquired?**	**Cost ($)**
	Tundra Tarp	no	30
	Regular tarp	no	20
	Cookware	yes/no	30
Camp Gear	Silverware	yes	25
	Stoves (x2)	yes	---
	Stove bottles (x2)	yes /no	15
	Fuel	no	?

	Bear Cans (2)	yes/no	175
	Food packaging	yes/no	20
	Compass	yes/no	15
	Maps	yes/no	50
	Xerox copies of maps	no	0
	Map case	no	25
	Gear	**Acquired?**	**Cost ($)**
Safety	Spot Beacon	No	100
	Spot Subscription	no	100
	SAT Phone	no	*
	SAT Phone minutes	no	80
	Bear Spray (2)	no/yes	30
	Bear Banger (Launcher + Cartridges)	no	40
	Item		**Cost ($)**
Other Expenses	Fishing License		100
	Resupply via Aylmer Lake Lodge		750
	Flight (Gjoa Haven to Yellowknife)		3000
	Food (72 days)		864
	Gas (WA to NWT RT)		1185
	Boat (Chantry to Gjoa)		400
	Travel Insurance (2)		150
TOTAL COST			$7,942

Right now, with the support of the Bishop-Marcus reward, our trip is financially feasible. We are still working on acquiring a few different gear sponsorships and pro-deals that will bring down the cost of personal gear. We also anticipate this list to change slightly in the next few months as we talk to others familiar with extended canoe expeditions and as we train for this great journey.

We are so thankful for the Bishop-Marcus committee and this award. We plan to keep you updated as we continue planning for our trip to the Barrenlands.