



Ritt Kellogg Memorial Fund Registration

Registration No. Z3FM-466G5

Submitted Jan 10, 2018 10:45am by Eliza Stein

Registration

2018

Ritt Kellogg Memorial Fund

RKMF Expedition Grant 2017-18 Group Application

This is the group application for a RKMF Expedition Grant. If you have received approval, you may fill out this application as a group. In this application you will be asked to provide important details concerning your expedition.

**Waiting
for
Approval**

Participant



I. Expedition Summary

Expedition Name

We Can See Russia From Our Rafts: Climbing and Packrafting in the Brooks Range

Objectives

We are looking to have an adventurous and multifaceted trip in the far north, combining the skills of different party members. Two of us (Jamie and Joe) did a base camp climbing trip last year and found that the sedentary nature of weather window waiting took something away from the beauty of the Unclimbables. We wished we floated in or out to fully experience what the area has to offer.

The goals of the trip are to hike and climb in the stunning Arrigetch peaks, then float an 135 mile stretch of the Alatna River to its convergence with the Koyukuk river.

As seniors, we hope to culminate our backcountry experience and CC careers on a multi-sport trip to one of the most remote areas of North America. We hope to accomplish this goal by following the spirit of Ritt; traveling over vast expanses of pristine land where the scenery changes slowly enough to take in the beauty and awe that only backcountry travel can provide. We hope that this trip will send us into the daunting realities of post-grad life with increased maturity and appreciation for the wonderful lessons we learned while at CC.

Location

We will begin our trip at Circle Lake in Gates of the Arctic National Park, and we will immediately embark on a twelve mile hike into the Arrigetch Peaks. These are some of the most remote granite peaks in North America. The wild spires are home to a wide range of climbing, from 5.11X to third class hiking. They are 80 miles from the nearest town (Allakaket, pop 105), which cannot be accessed by road.

After leaving the Arrigetch we will float the Alatna River--a wide, meandering class I river--to the town of Allakaket, where we will end our trip. The Alatna River is one of Alaska's renowned National Wild and Scenic Rivers. It is a popular float due to its mellow nature, breathtaking views, and access to the most remote areas of Alaska's Brooks Range.

Departure Date

Aug 5, 2018

Return Date

Aug 30, 2018

Days in the Field

26

Wilderness Character

Our trip begins in the Gates of the Arctic National Park. Over 8 million acres, it is the second largest park in the United States. Nothing says wild quite like Alaska: "The remoteness of the peaks and the difficulty of access makes climbing in Gates of the Arctic one of the most isolated wilderness climbing areas in the country" (Pfieffer and Lawler, History and Route Descriptions of Rock Climbs in the Arrigetch Peaks, Gates of the Arctic National Park and Preserve, Alaska, 2002). The remoteness of the Arrigetch deters crowds and development, thus preserving the wilderness character of the area.

We will consistently be over 50 miles from the nearest towns, which will for the most part be air access only. We will be visitors of the land, subject to all elements and beauty. We will experience the wilderness character of the land not only through the far isolation from any human infrastructure, but also due to our means of travel; once dropped off by the float plane (the only reasonable and most commonly accepted means of transportation into Gates of the Arctic) all our transportation will be human and river powered.

The rivers are wild, by federal designation, and some of the most remote in the US. Our starting point and subsequent hiking and climbing will be within the Gates of the Arctic National Park, a park dedicated to the preservation of wilderness area. Once we leave the borders of the park, a lack of infrastructure remains. Until we reach the town of Allakaket we will not have any contact with human infrastructure.

II. Participant Qualifications

a. Participants' Graduation Date

Joe Purtell (2018)

Eliza Stein (2018)

Jamie Smith (2018)

Peter Koe (2018)

b. Medical Certifications

Eliza Stein, May 2019

Jamie Smith, January 2019

Peter Koe, January 2020

Joe Purtell, scheduled for recert in May 2018

Does your group have adequate experience?

Yes

d. Training Plan

We will need to be in top physical shape for our trip in addition to solidifying skillbases. As no one on the trip will be attempting any technically challenging routes, our focus will be on general strength for more mountaineering style objectives. We will execute a regimented plan focusing on cardio and full-body fitness for hiking and paddling.

We do not underestimate the mental fortitude required for alpine travel. Jamie and Joe will climb multi-pitch and alpine routes to keep their minds in shape, focusing on length rather than difficulty, while Peter and Eliza will climb

several intensive 3rd-4th class peaks off trail.

While Eliza has significant paddling experience, Jamie, Joe and Peter have less. The whole team will get together in the spring and early summer to get the boys up to speed on a few rivers. At least one of these trips will contain an overnight aspect to practice paddling with lots of gear as well as aid in developing our efficiency during river travel. In addition, Jamie, Joe and Peter will take a swiftwater rescue course in the spring through the American Canoe Association (ACA).

We will also refresh our bear protocol skills. Last year the Ritt Kellogg Fund provided a bear training in the spring. If this is offered again we will take full advantage of this opportunity, if not we will sign up for an official training.

Potential Training Routes for Joe and Jamie:

Glacier Gorge Traverse: RMNP, 5.7 III

Ellingwood Ledges: Crestone Needle, 5.7 III

Blitzen Ridge, RMNP, 5.4 III

Dark Star, Palisades, 5.10c V

Potential Training Routes for all members:

Longs Peak, RMNP

Sneffels Peak, San Juan Mountains

Required Training Float:

Dolores River: Bedrock to Gateway (Class II+, 44 miles, multi-day).

This multi-day float will cement our skills in class II+ water, which is slightly higher than water we will encounter on our expedition. It is necessary, though, so that we are absolutely confident in our abilities while on the Alatna River.

Potential Training Floats (all of these are easily accessible from Mancos, where we will rent our training packrafts):

Animas River: Bakers Bridge to Trimble Lane (Class I-II, 6 miles, day trip)

Animas River: Trimble Lane to 32nd Street Park (Class I-II, 10 miles, day trip)

San Miguel River: Naturita to Dolores Confluence (Class I, 20 miles, multi-day)

III. Expedition Logistics, Gear and Food

e. Travel Plan

We will meet in Fairbanks, flying in from different locations. Eliza and Jamie will fly from Denver, Joe will fly from San Francisco, and Peter will fly from Portland.

Once in Fairbanks, we will take the Dalton Highway Express bus to Coldfoot. From Coldfoot, a Coyote Airways float plane can take us to our drop point, Circle Lake.

The most dangerous part of our approach will be the float plane. Small planes are more risky to travel on, and pilots new to Alaska can overstate their qualifications. Thankfully, our pilot Dirk Nickish is a third generation pilot with a long history of flying in Alaska. He flies a Beaver, which Jamie and Joe have used before with great, safe results.

We will return by commercial plane from Allakaket to Fairbanks, and then we will fly commercially homewards.

e. Expedition Itinerary

[Ritt Itinerary 2017.pdf](#) (6.5MB)

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Appendix A

Empty

No

Food Storage

Following National Park law, we will store all food in bear canisters or bags for the entirety of the trip. Before hiking into the Arrigetch Peaks, we will store our food in hard-sided bear canisters buried in bushes and away from the river and set up a bear fence around it. While not with our food in the Arrigetch Peaks, we will utilize bear hangs for further avoidance of bear contact with our food.

g. Food List

[Ritt Food Lst.xlsx](#) (38KB)

Uploaded 1/9/2018 8:16pm by Eliza Stein

Appendix C

f. Equipment List

[Gear list 2017.pdf](#) (98KB)

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Appendix B

b. LNT Principles

Yes

Empty

All members of the team are well versed and practiced in LNT principles. While hiking we will remain on any existing trail (when one exists) and we will camp in established sites or in unused and durable terrain. Few traces from climbers exists due to the small number of annual visitors, so we will not add any unnecessary traces. We will carefully examine all booty gear and tat before using or removing, and we will take precautionary measures to avoid the addition any unnecessary bail gear. When we leave gear for any period of time, all food and gear caches will be meticulously animal proofed through the use of bear canisters, bear hangs and bear fences. By practicing bear protocol, we hope to avoid any interaction with bears. Disposal of waste properly will be extremely important in the alpine environment. We will minimize our hole impact by making a latrine at each campsite and only using this, then bury all the waste deeply.

While on the river, we will camp on gravel and sand. We have already identified these locations on the map and planned our travel accordingly. We will dig catholes for solid human waste at least 200 feet from the river and pack out all garbage. We will urinate and dispose of strained dishwater into fast-flowing sections of the river, away from our camp.

IV. Risk Management

b. Objective Hazards

Due to the remote nature of such a trip, we will avoid any unnecessary risks and will take any and all precautions to avoid emergency situations.

Animals:

Bears are scary, and one of our chief concerns on the trip. We will hike with extreme caution, especially through densely shrubbed areas, wear bells on our packs and make a lot of noise. We will hike as a tight group, staying near arm's length with each other so we can bunch up and look big at a moment's notice. Constant chatter while hiking will provide noise as a deterrent but we will also pay attention to wind direction (trying to stay upwind of where we are going if possible) and avoid very densely vegetated areas when other options are available. We will also bring bear spray but hope to never use it by implementing our knowledge of bear avoidance. Using bear bags and canisters in combination with bear hangs will keep our food safe. The national park requires all food stored in bear proof containers, so we will abide by their rules to keep bears disinterested in human interaction.

Our stay in the Arrigetch peaks will be above tree line and out of primary bear habitat, but we will always be with at least one other person just in case. During the climbing days our two teams of two will each have bear spray and hike close together while avoiding densely vegetated areas where a bear could be hiding. While the Arrigetch Peaks are above the tree line, and have little food for bears, the hike up and raft out will be through definite bear country. With the salmon run, bears will be near the river but this also bodes well for us; the bears will be satiated, thus less likely to resort to human interaction for food. We will stop along the river to cook dinner, then float for at least another mile to set up camp. This will prevent the aromatic attraction of bears into our camp and let us rest easy at night to be ready for another long day on the river. If islands in the middle of the river appear safe and suitable (no danger of flooding), we will camp on them to reduce the chance of having a bear encounter.

If we do encounter a bear, we will all join together to increase our perceived size. We will do everything possible (back away, reroute our path, set up camp in a different location) to avoid the bear noticing our presence. If the bear does notice us we will back away slowly, hoping it loses interest. If the bear charges, we will spray a warning shot of bear spray when it is ~10m away from our tightly packed group. If the bear continues to approach we will unload the bear spray into its face in the hopes of temporarily debilitating the bear. We will then quickly remove ourselves from the area and abide by all previously mentioned bear avoidance protocols.

Moose are another potentially dangerous animal interaction we could encounter. While we will mostly be out of their primary habitat, extra considerations will be taken to avoid such marsh land. If contact is made with a moose, we will slowly back away and diverge from their area. Extra caution will be taken if a calf is present so as to not worry the mother. If a moose charges we will hide behind something sturdy like a tree until the moose become disinterested. Hopefully we will be aware enough to avoid such interactions, but we are aware of the protocol if we find ourselves in such a situation.

Wolves are present in the Gates of the Arctic, but no human interactions have been recorded in the past 30 years. Wolves tend to avoid humans at all cost, especially when in large groups as we will be following bear protocol.

Rockfall/ Other parties:

Rockfall can be a significant hazard in the mountains, especially in peaks as remote as the Arrigetch. We are proposing more routes than we can feasibly climb partially because we know rock quality can vary route to route, and we want to have options if one of our plans looks looser than expected. We will assess the quality of the rock and avoid any route that has high potential of being dangerous. That being said, we are seeking first hand info on rock quality for the routes we have proposed. Niels Davis and Hanson Smith, who went to the Arrigetch on a Ritt grant in 2013, reported good rock on the NNW Ridge of Parabola Peak.

While on route, we will set belay away from the fall zone of loose rock on the next pitch wherever possible. We will avoid minefields of loose blocks and dangerous chimneys, even if it means retreat. We will wear our helmets at all times and be in constant communication about loose rock. During the rappels, we will check anchor quality before committing to the rappel and once at the next belay station, will aim to be out of the fall path.

To avoid dangers from other parties, similar precaution will be taken as with rock fall. We will avoid belay stations that could be within a fall path from rocks kicked off from other parties, and we will be in constant communication with the other parties encountered. Luckily, the Arrigetch Peaks are not often visited for climbing trips, so we will most likely have all the routes to ourselves.

Leader Fall:

The climbing in the Arrigetch is often run out. For this reason, we are climbing routes significantly easier than our maximum grades. Still, wet rock and route finding difficulties could cause a fall. We will place protection when possible even if the climbing is very easy in case of the unknown. Belayers will be attentive to the leader to give the best catch possible should it be required. Joe and Jamie have taken informal rock rescue clinics with Ryan Hammes where leader fall rescues were gone over. We will ask Ryan to review this clinic this spring to refresh our rescue techniques.

Weather:

In the Arctic Circle, it can snow at any time of year. Storms can freeze fingers, making climbing/hiking/paddling treacherous. Poor visibility can make retreat and route finding difficult.

We will exercise extreme caution while climbing/hiking in the Arrigetch. Rainfall will likely be near constant, and threaten even when the skies are clear. We expect to hike in mild to moderate showers. We will climb only when the rock is not completely saturated but we have selected moderate climbing objectives where we are confident we can continue climbing if a light storm blows in mid-route. We will bring appropriate layers on all climbs/hikes even if its bluebird. If it rains/snows while we are in the mountains, we will closely monitor the weather to help inform our decision on continuing or bailing.

Lightning is of little concern in the Brooks Range but we will continually monitor the skies and immediately bail if any electricity is sensed or seen. Joe and Jamie have spent many seasons in the Alpine of Colorado and can judge when a lightning storm is imminent. Both members have developed a respect for the power and intimidation of such storms, so they will be extremely cautious to avoid such situations.

While on the river, we will be able to float through rain and snow. We will travel with extra warm synthetic layers and use drybags to keep all sleeping bags and clothes dry. If we suspect any lightning risk, which includes seeing lightning or hearing thunder, we will immediately pull to shore, exit our boats, and perform proper lightning protocol. If flashes are less than thirty seconds apart, group members will spread to about fifty feet apart and crouch on top of drybags or sleeping pads to be insulated from the ground. We will remain in this position until thirty minutes after the last flash of lightning and return to a protected area as soon as possible.

River:

When recreating on the river, it is always important to keep in mind that flowing water can be incredibly dangerous; it is always more powerful than a person. We will always wear helmets and PFDs while on the water.

River travel presents many hazards. The most significant risk involves swimming in the event of flipping a raft. We will float on only the sections of river which we are confident we can navigate successfully. We have chosen very calm sections for this reason. We will exercise caution in the face of rapids and blind corners, and we will not hesitate to scout. Depending on what we see while scouting, we will decide if any section of river is beyond our level of comfort, and in these cases we will portage or line the rafts, depending on the intensity of rapids and terrain. If we choose to run the section, we will be able to do so with confidence of which route is the safest. We will use extreme caution and portage any potentially dangerous obstacles.

If a member of our group ends up swimming, we will take the following precautions:

- Move to upstream of the boat
- Blow whistle and look for a throw rope
- Swim with our feet up and pointed downstream to avoid foot entrapment
- When possible, swim aggressively toward a safe spot on shore
- Swim aggressively away from downstream dangers, such as rocks, strainers, and holes
- If unable to avoid a rock or strainer, swim aggressively toward it and climb on top or over it
- If unable to avoid a hole or ledge, ball up to be flushed to the bottom

With a group of four, other members of the group will be able to help rescue a swimmer. If the swimmer is unable to swim to shore alone, they can hold the back of another's boat and be towed to safety. Swimmers can also receive a throw rope from other group members. We will work to minimize amount of time the swimmer spends in the water.

The largest risk associated with swimming is entrapment. To avoid this, we will keep our feet up and not stand up until we are fully to shore. Similarly, entanglement in gear or ropes can be very dangerous. We will each carry an accessible river knife and maintain neat loads to minimize stray straps or loops.

Packrafts carry their own potential risks. We will not be using spray decks because we will be paddling small and few rapids. This makes wet-exits upon capsizing easier and safer. When strapping down our gear, we will avoid using non-locking carabiners and any exposed straps/ropes that could pose a threat of foot entrapment. We will carry 2 extra paddles (one per two boats) in case of broken or lost gear. We will closely follow all safety protocols as outlined in the American Packrafting Association Safety Code: <http://packraft.org/wp-content/uploads/2017/02/APASafetyCode.pdf>

A final risk particularly associated with Alaskan rivers is mosquitos. In order to prevent an excess of bites, we will wear long pants and shirts at all times, and bug spray will be handy in our boats. We will carry mosquito head nets for evening wear, and will have ointment in our first aid kit to limit itching of bites.

Cold:

Hypothermia is our primary cold related concern while floating. If found in the unfortunate situation in which one of us falls into the river, we will rapidly go ashore to dry off clothes and bring the body temperature back up. This is the best method of preventing the development of hypothermia into more serious stages.

Frostbite and frostnip are also potential concerns during this trip. We will avoid such injuries by bringing proper clothing (especially gloves and warm socks) and constant monitoring of cold extremities. Similarly, to prevent trench foot during our hiking days, we will be sure to warm and dry our feet every break and every night. Bringing enough extra socks will help in reducing this danger as well as proper water resistant hiking shoes.

As a team we will be patient with one another to ensure safe travel and proper prevention of very serious cold related issues.

Glaciers:

There are many glaciers in Gates of the Arctic National Park, but are easily avoidable. We will not travel on or near glaciers to avoid any dangers they could present.

Human Error:

We believe human error should be treated as an objective risk. Exhaustion can lead to deadly mistakes, and we will constantly monitor one another to be aware of our own and other team members' mental condition and consider it a safety hazard as serious as rockfall. We will check in with each other on hiking and technical climbing routes and be honest with ourselves about how alert we feel. It is imperative to separate personal goals of summiting with the hazards of judgement-altering fatigue. On the floating portion of the trip, the slow paced nature of the float will also allow us to take the necessary time to avoid serious injuries and rest when fatigue sets in.

Evacuation Plan

The remote nature of the Arrigetch peaks and Alatna River makes it difficult to implement a rescue in an emergency situation. Fortunately, the members of this team are well trained and experienced to handle such a situation. On the majority of the days, all four members will be together. On the few climbing days in the Arrigetch Peaks where Joe and Jamie will climb while Eliza and Peter hike, we will both carry Garmin inReach devices to remain connected while not physically together. These devices that can communicate via text to one another, as well as send out emergency signals. This device is connected to a 24 hour emergency response center run by Garmin where the resident team will implement search and rescue to the scene of the accident. All members of the team will need to be self-sufficient to keep the patient stable while emergency help is organized and in transport. If a slow evacuation is needed, we will contact our float plane pilot via a satellite phone.

If an emergency happens on a technical rock route, Joe and Jamie are prepared for such a situation. Joe and Jamie have taken an informal rock rescue clinic with Ryan Hammes to review rescue techniques while on technical rock routes. We plan on asking for a refresher this spring. If Ryan is not available, we will take an official rock rescue clinic

from Pikes Peak Alpine School. Additionally, Jamie plans on taking an AMGA Rock Guide course this summer which has a large portion dedicated to rescue in technical terrain. If an emergency occurs while on a technical route, the other member will utilize their skills to safely rescue the climber and return to the ground safely. If the injury is serious but not a danger to life or limb, both members will aid in lowering off the route immediately. If the injury is an emergency, communication will be made to the other team and emergency responders (via inReach) to meet at the base of the rappels to bring the injured climber to safety and prepare for evacuation. This situation is where the rock rescue skills are most valuable and are to be implemented.

Once safely on the ground, the rescue is not over. In the situation of a non-life threatening injury or illness, communication to the float plane pilot via a satellite phone will be made for pick-up at the drop-off lake. All injuries will be evaluated to decide the best plan of removal. The hike is long and strenuous but doable with a slow pace in the case of an injury.

Eliza already has swiftwater rescue, and all other members of the team will take this course for optimal preparedness for river emergencies. An emergency signal will be sent, but the necessary rescue protocol will be followed to remove the boater in danger. All four members will be together during the floating section, so sufficient help will be available to implement the rescue.

The hiking portions are the least dangerous portion of the trip but that does not mean we will let down our guard. If such an emergency does occur, we will take the necessary precautions to get the patient to safety and stabilize them. We will call for an emergency evacuation and keep the patient comfortable.

Special Preparedness



e. Emergency Resources

We will contact all of these resources with our satellite phone. If Jamie and Joe are on a climb and don't have access to the satellite phone, they will activate the SAR feature on their inReach or text Peter and Eliza to call on the satellite phone if the situation is less emergent.

Dirk Nickisch, Float Plane Pilot, Coyote Air:

907-687-3993

Bettles Ranger Station (Field Operations)

This is a summer seasonal phone that will be answered from June 1 - September 30, seven days a week.

907-692-5494

Fairbanks Alaska Public Lands Information Center

101 Dunkel Street

Suite 110

Fairbanks, AK 99701

907-459-3730

Arctic Interagency Visitor Center (Coldfoot): 907-678-5209

Anaktuvuk Pass Ranger Station: 907-661-3520

Coldfoot Ranger Station: 907-678-4227

Fairbanks Memorial Hospital
1650 Cowles St, Fairbanks, AK 99701
[\(907\) 452-8181](tel:(907)452-8181)

Maniilaq Health Center
436 5th Ave, Kotzebue, AK 99752
[\(907\) 442-3321](tel:(907)442-3321)

Samuel Simmons Memorial Hospital
7000 Uula St, Barrow, AK 99723
[\(907\) 852-4611](tel:(907)852-4611)

Wright Air Service
3842 University Avenue South, Fairbanks, AK 99709
[\(907\) 474-0502](tel:(907)474-0502)

Emergency Communication

We will carry two Garmin inReach devices for use to communicate between group members, emergency signaling, and weather updates. In addition we will carry one satellite phone to communicate with the float plane pilot in case plans are altered for whatever reason, or we have a non-emergency situation that we need help or resources to handle.

V. Budget

Budget

[Budget 2017.pdf](#) (90KB)
Uploaded 1/9/2018 8:31pm by Eliza Stein

Appendix D

Transportation

5304

Food and Fuel

1750.56

Maps and Books

0

Communication Device Rental

120

Permits/Fees

0

Gear Rentals

3710

Total Funding Request

2500

Cost Minimization Measures

The extreme remoteness of Gates of the Arctic National Park provides for difficult access. The flight to Fairbanks provides a safer means of travel as well as allowing us to spend more time in the backcountry by eliminating the need to drive 52 hours each way. The bus to Coldfoot reduces the cost of car rental or the hiring of a private shuttle. The flight from Coldfoot into Circle Lake is the cheapest means to access the Arrigetch Peaks and Alatna River (in comparison to flying to Bettles then flying into Circle Lake). As far as packrafts go, we found the least expensive rental company, which happens to be outside of Fairbanks, but shipping will cost no more than \$50 for all four boats. We already own one inReach device and the satellite phone will be rented from the CC gear house, as well as bear canister rentals. Any additional bear canisters needed can be rented for free from the Ranger Station in Fairbanks. All food and final gear can be bought in Fairbanks where these items will be less expensive than other Alaskan towns as well as reducing the cost to transport heavy bags on airlines.

VI. Expedition Agreement

Expedition Agreement

[group signatures.pdf](#) (355KB)

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Appendix E

Appendix A- Itinerary

Pre-Trip: 8/3

Fly into Fairbanks. We will get all food, fuel and bear spray in Fairbanks. The Ranger Station has detailed maps, that are not available online, for us to utilize.

Pre-Trip: 8/4

Take Dalton Highway Express bus (6:00 am) from Fairbanks to Coldfoot.

Day 1: 8/5

Fly via float plane from Coldfoot, AK to Circle Lake with . Camp at Circle Lake. We will store our rafting gear and extra food (using bear hangs and bear fence for safety) at the lake, as is the commonly accepted method.

From here on out, our slow evacuation plan is to call our float plane pilot. Our emergency evacuation plan is to use our satellite phone and/or InReach device to call Search and Rescue.

Camp coordinates:

67.4871, -153.8783

5W 0462472E 7485948N

Day 2: 8/6

Hike halfway to Arrigetch Peaks. There is a faint game trail on the east side of Arrigetch Creek that most trip reports used to get up into the foothills of the Arrigetch. We will hike about 4.5 miles up Arrigetch Creek to where the terrain flattens and opens up. Many groups have camped in this location.

Approximate camp coordinates:

67.4781, -153.9964

5W 0457411E 7485021N

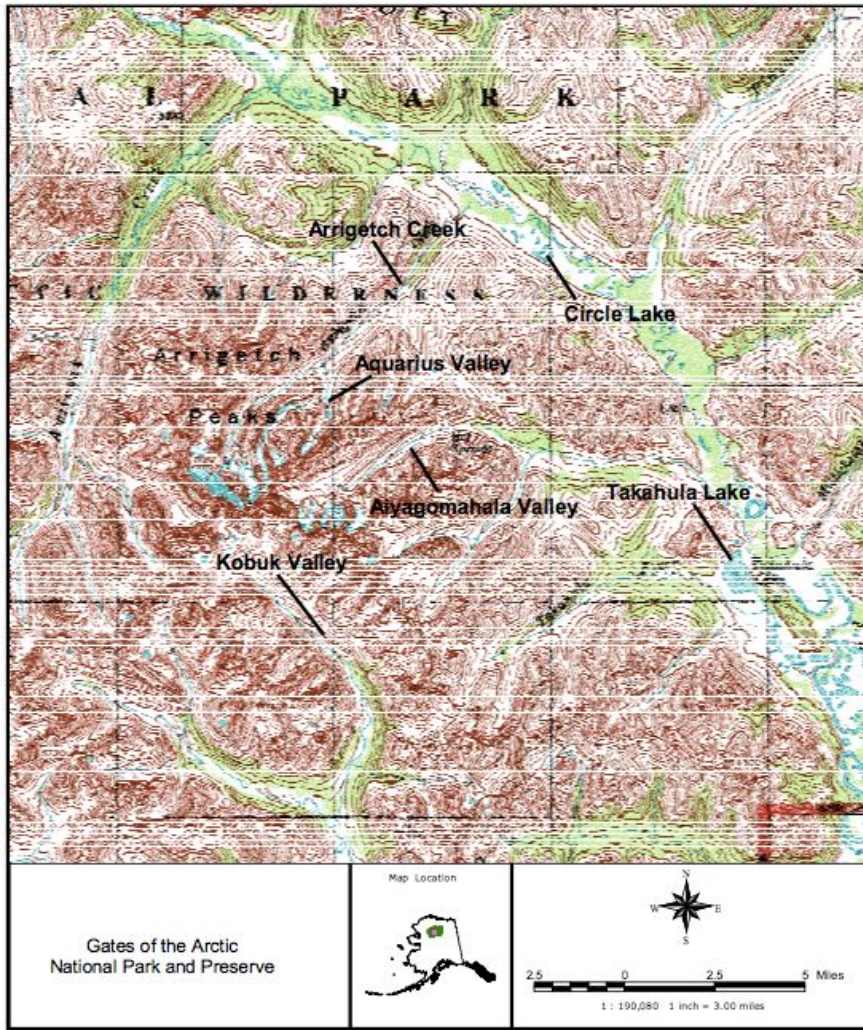


Fig. 1. General location of the Arrigetch Peaks in Gates of the Arctic National Park and Preserve, Alaska.

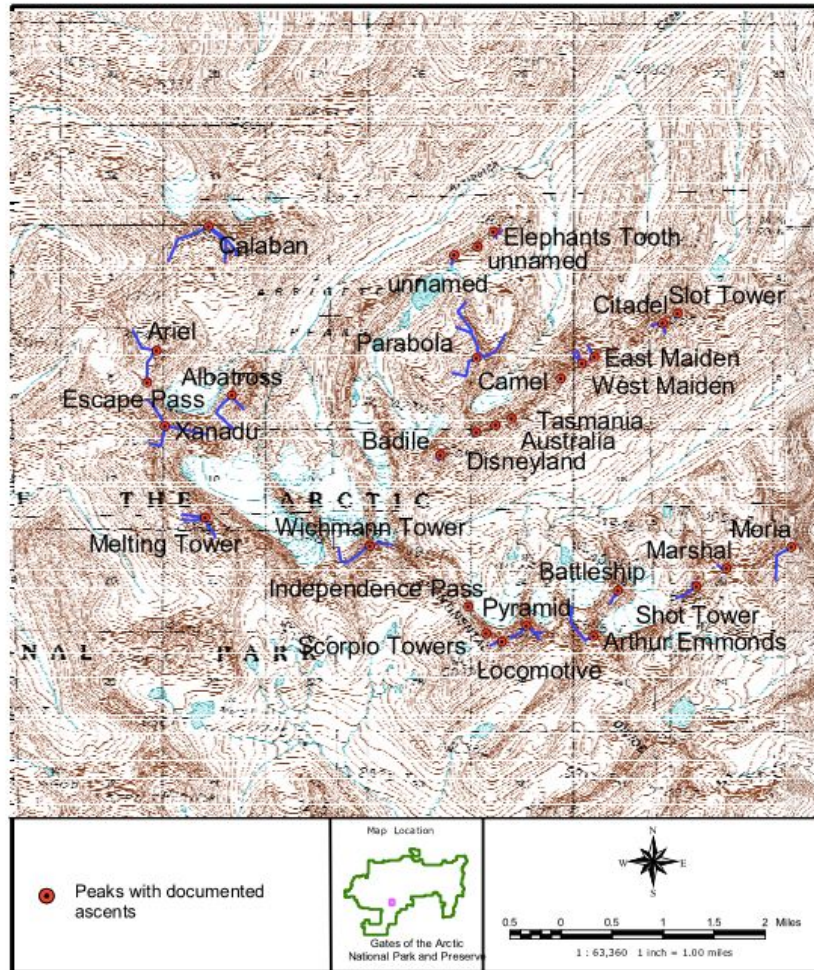


Fig. 3. Overview of major peaks and climbing routes in Arrigetch Peaks, Gates of the Arctic National Park and Preserve, Alaska, 1964 – 2003.

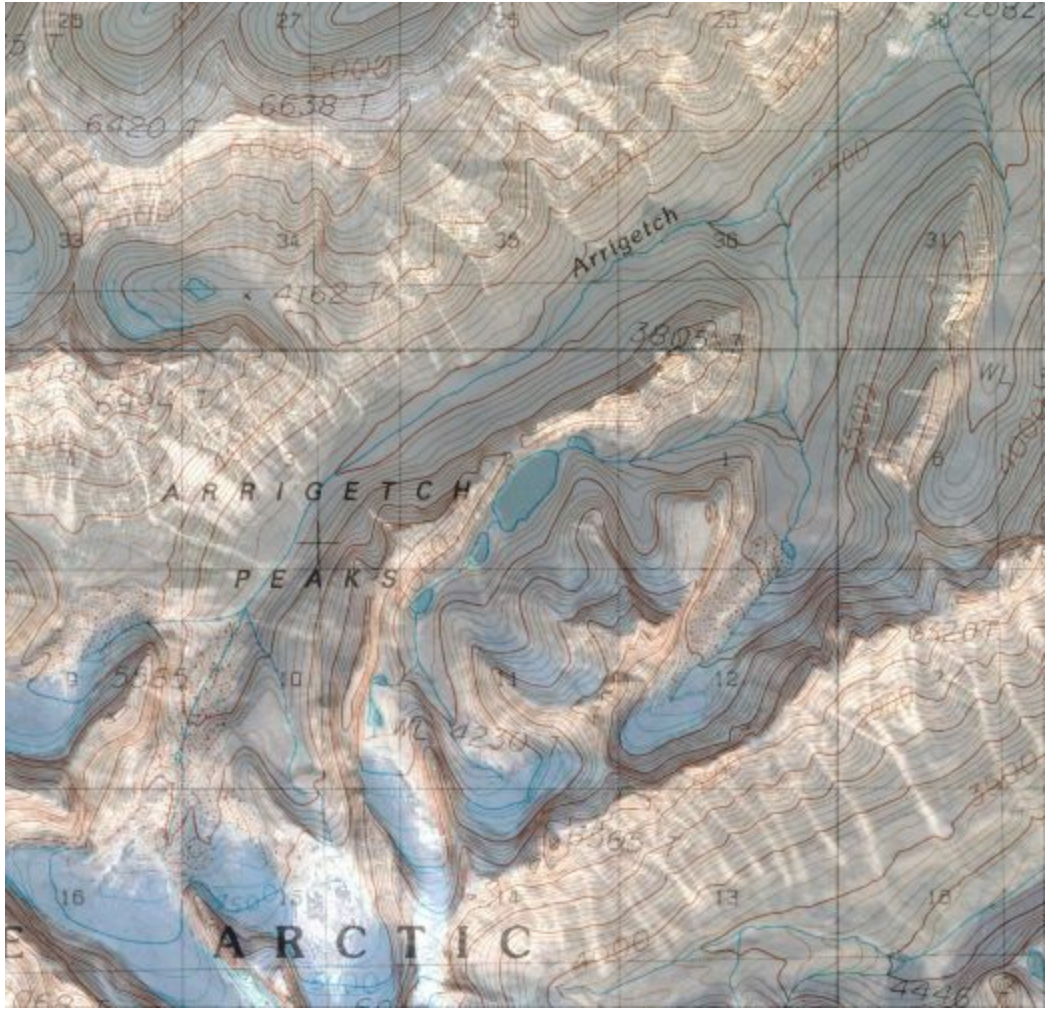
Day 3: 8/7

Hike remaining portion of the Arrigetch Creek to the confluence of Aquarius Valley, and then travel through Aquarius Valley until we find a good place to camp. Several groups have camped in this valley previously. The trail remains in the Arrigetch Creek valley, and despite being arduous hiking, it is very difficult to get lost. We will set up a basecamp up Aquarius Valley well outside of any rock fall zone.

Camp coordinates:

67.4255, -154.0890

5W 0453348E 7479223N





***Note:** All remaining days in the Arrigetch are dependent on weather. Rain is extremely common and will likely prevent us from climbing and hiking. This itinerary represents an ideal weather window during our stay, but we fully accept this is unlikely to be the reality of our trip.

Day 4: 8/8-14

Rest/Scout Day:

Joe and Jamie: Scout the approach to Parabola Peak.

Day 5: 8/9

Joe and Jamie: Parabola Peak, North Northeast Ridge: III 5.7

Beta from first ascent team (2002):

The ridge is SE of the largest lake in Aquarius Valley. The teams ascended 700 vertical feet of easy 5th class to the flat ridge top from the east. Six pitches of moderate climbing to 5.7 followed the ridge south to a false summit. Neither team climbed the next few pitches of icy slab to the "Central" summit of the Parabola. The descent was 1 rappel west from the ridge to the slab gully, and 4 rappels down the slabs north of the ridge.

Descent beta from Neils Davis (Previous Expedition Grant Recipient to the Arrigetch): “we rappled toward a lake”

#3 on Fig. 10

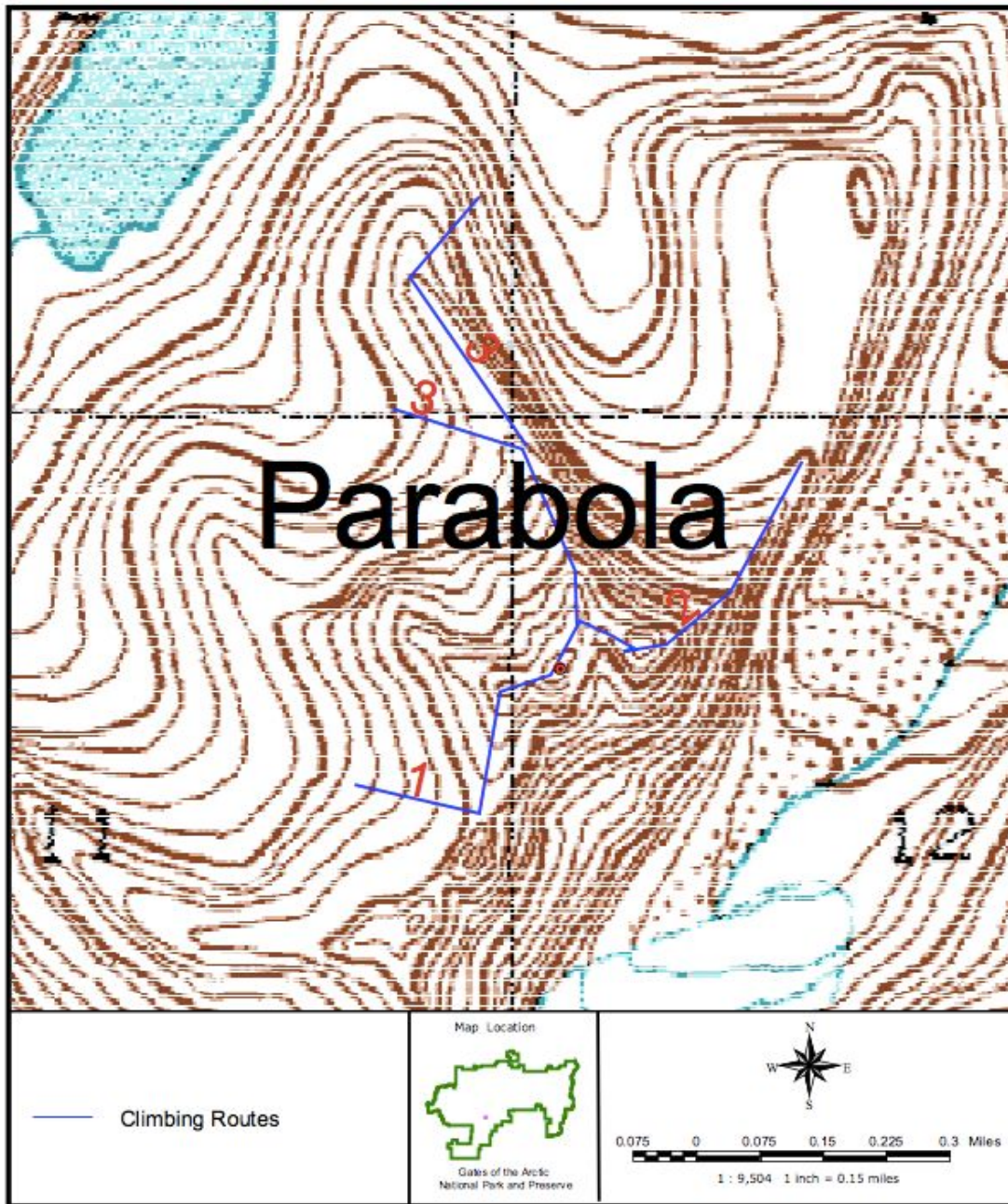


Fig. 10. Climbing routes on Parabola, Arrigetch Peaks, Gates of the Arctic National Park



Eliza and Peter: Hike south up the two drainages to explore the lakes and look at glaciers. These hikes provide stunning views with minimal exposure and no technical climbing.

Day 6: 8/10

Rest Day

Day 7: 8/11

We will use this day to switch valleys so our approach will be shorter the following day to Xanadu. The hike between the valleys appears easiest over the saddle to the southwest of Elephants Tooth, above Aquarius Lake. If this saddle appears too technical or the weather does not appear suitable, we will retrace our steps to the confluence of the Aquarius Valley and Arrigetch Creek, then hike back into the Aquarius Creek Valley. We will once again choose a campsite well outside of rockfall area. Energy and moral depending, we will scout the approach to Xanadu.

Camp coordinates:

67.4147, -154.1777

5W 0449529E 7478087N

Day 8: 8/12

Joe and Jamie: Xanadu West Face to South Arête: IV 5.7-5.8

Route Description from Alaska: A Climbing Guide

Ascend the scree slope to the base of the West Face at 5,000 feet. The route accesses the ridge via a long, right-slanting ledge with a short vertical 5.7 dihedral to gain the ridge. Once on the ridge, the route continues for two pitches to the base of the arete. Five 50 m pitches follow the crest of the arete leading to a prominent and intimidating roof. The 5.7 roof is climbed directly on excellent “Gunks”-like granite with buckets and good protection to a great ledge. From the ledge, ascend a short 5.7 section, then a pitch and a half to the summit.

Descent: Rappel the route. Be extra aware of the plated granite.

#1 on topo

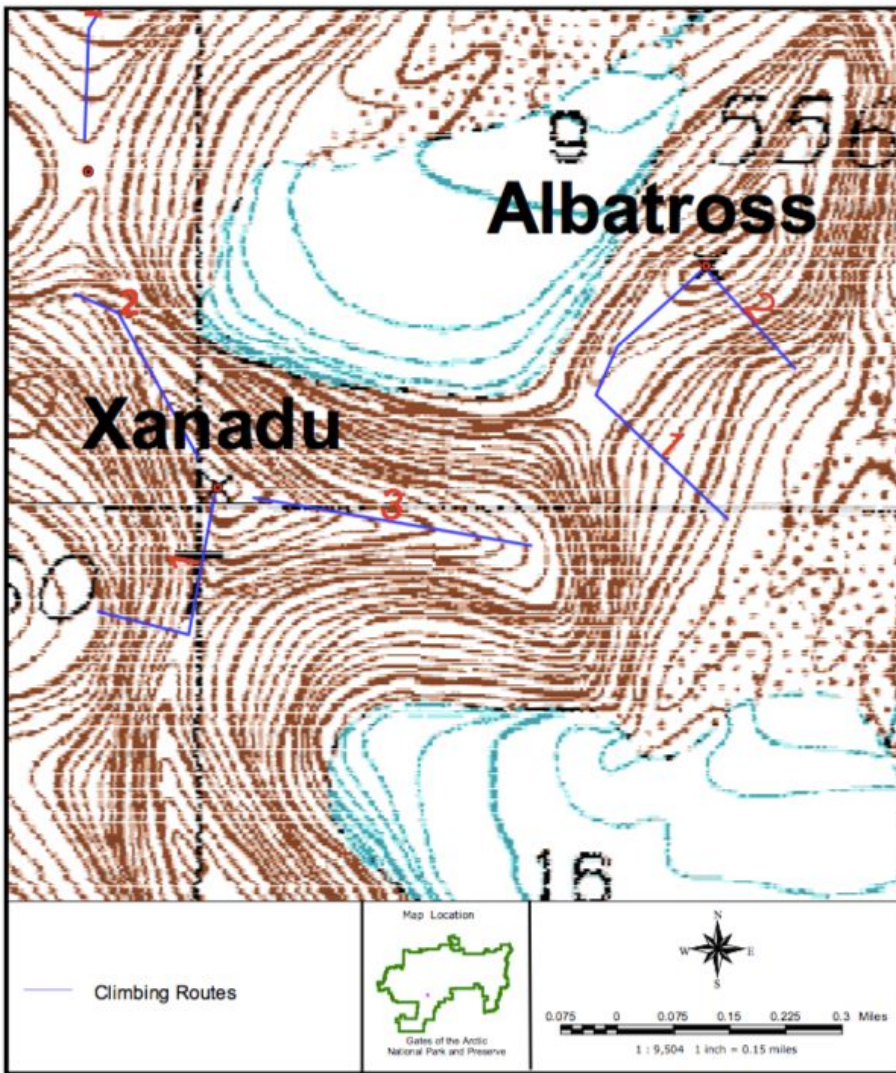


Fig. 6. Climbing routes on Albatross and Xanadu, Arrigetch Peaks, Gates of the Arctic National Park and Preserve, Alaska.

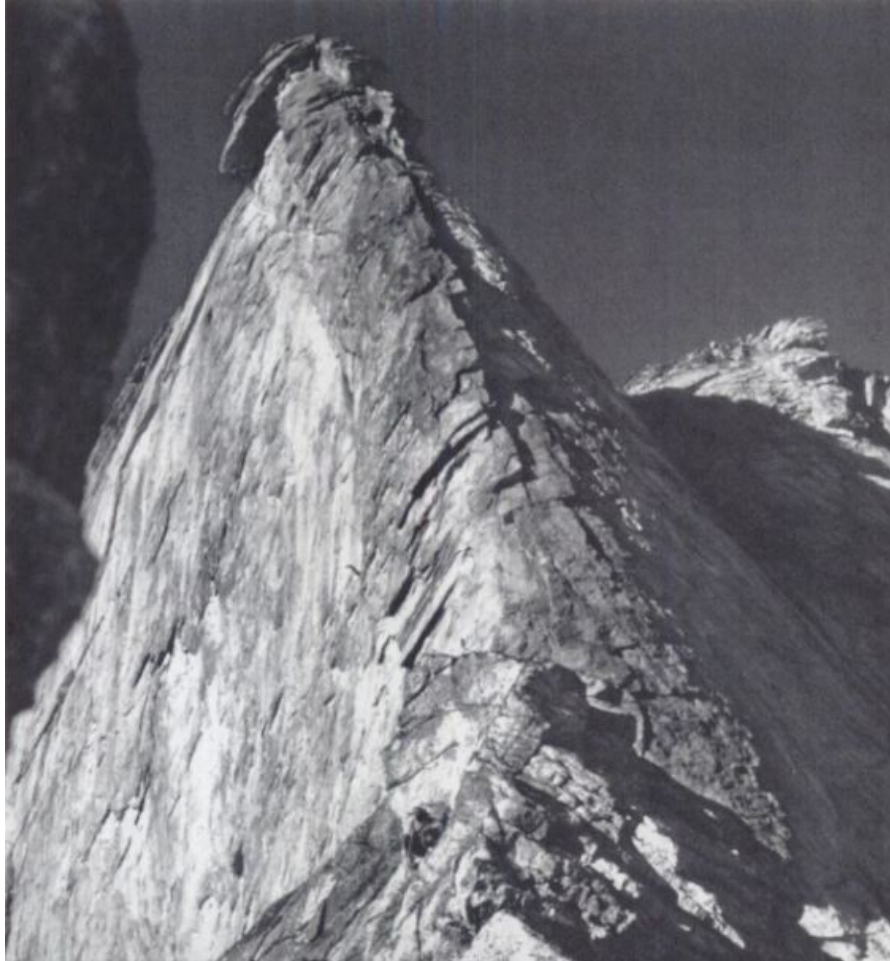


Fig 2. Looking at ridge from ledge at base



Fig. 3. Line delineates route path along Xanadu ridgeline.

Peter and Eliza: North ridge of Ariel Peak (6600 ft, ~5 miles): non-technical. Access from Escape pass between Ariel and 6022.



1 on Fig. 5 Ariel from Arrigetch Valley.

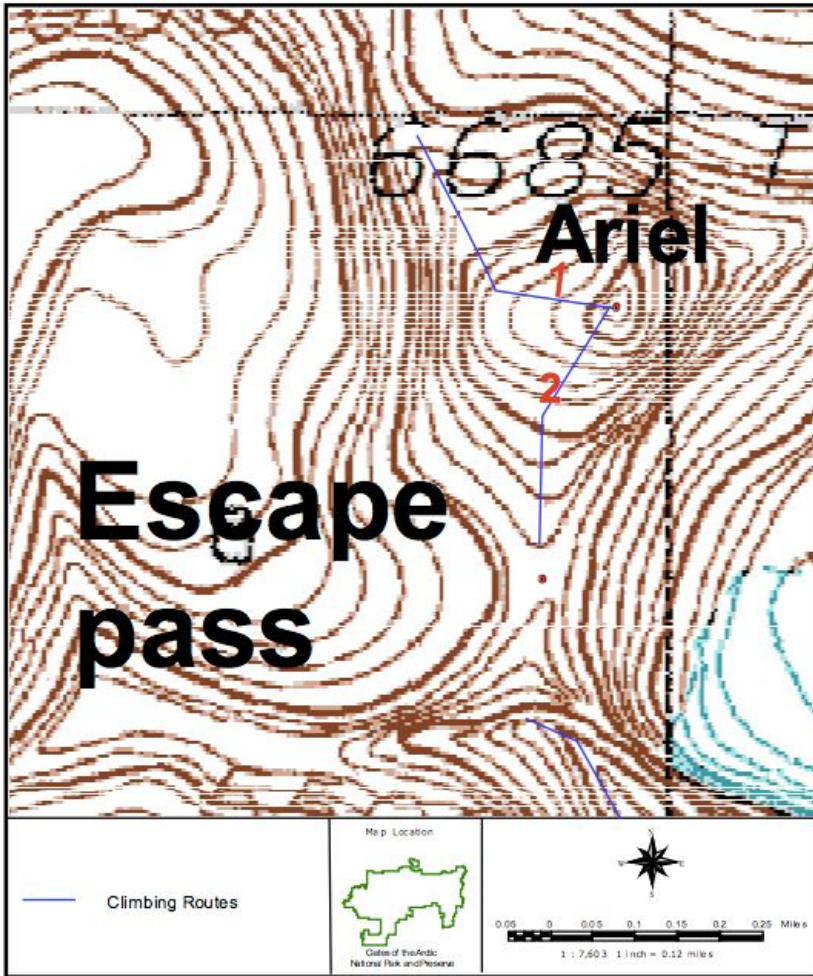


Fig. 5. Climbing routes on Ariel and Escape Pass, Arrigetch Peaks, Gates of the Arctic National Park and Preserve, Alaska.

Day 9-11: 8/13-15

The many auxiliary valleys within the main Aquarius valley provide beautiful day hikes. All remain off of glaciers and are easy to bail from in case of severe weather. Description from Arrigetch Climbing Report:

“There are about half a dozen valleys running from basecamp up to the base of the granite peaks. All of the valleys are known to be great hikes to views of the rugged peaks, lakes and glaciers.”

Day 12: 8/16

Leave the Arrigetch Peaks and hike toward the Alatna River, again through the Arrigetch Creek drainage. We will camp 4 miles down the drainage at the same location we camped on the way in.

Camp coordinates:

67.4781, -153.9964

5W 0457411E 7485021N

Day 13: 8/17

Hike the rest of the way through the Arrigetch Creek drainage to the Alatna River. Pick up our packrafts and rations for the river section and camp on the southwest shore of the Alatna river. From here on out, we will use a bear fence while at camp.

Camp coordinates:

67.4841, -153.8412

5W 0464053E 7485592N

Day 14: 8/18

Review river safety and communication with the group and create a travel plan (i.e. make sure we're all within ear/eyesight of each other, set a goal for speed, plan when to take our first break). Paddle the first 13.5 miles of the Alatna River! Camp on the west shore of the river near the northern edge of Takahula Lake.

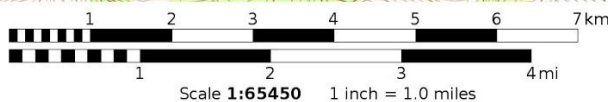
Camp coordinates:

67.3648, -153.6536

5W 0471928E 7472191N



Mercator Projection
WGS84
USNG Zone 5WMQ
CalTopo.com



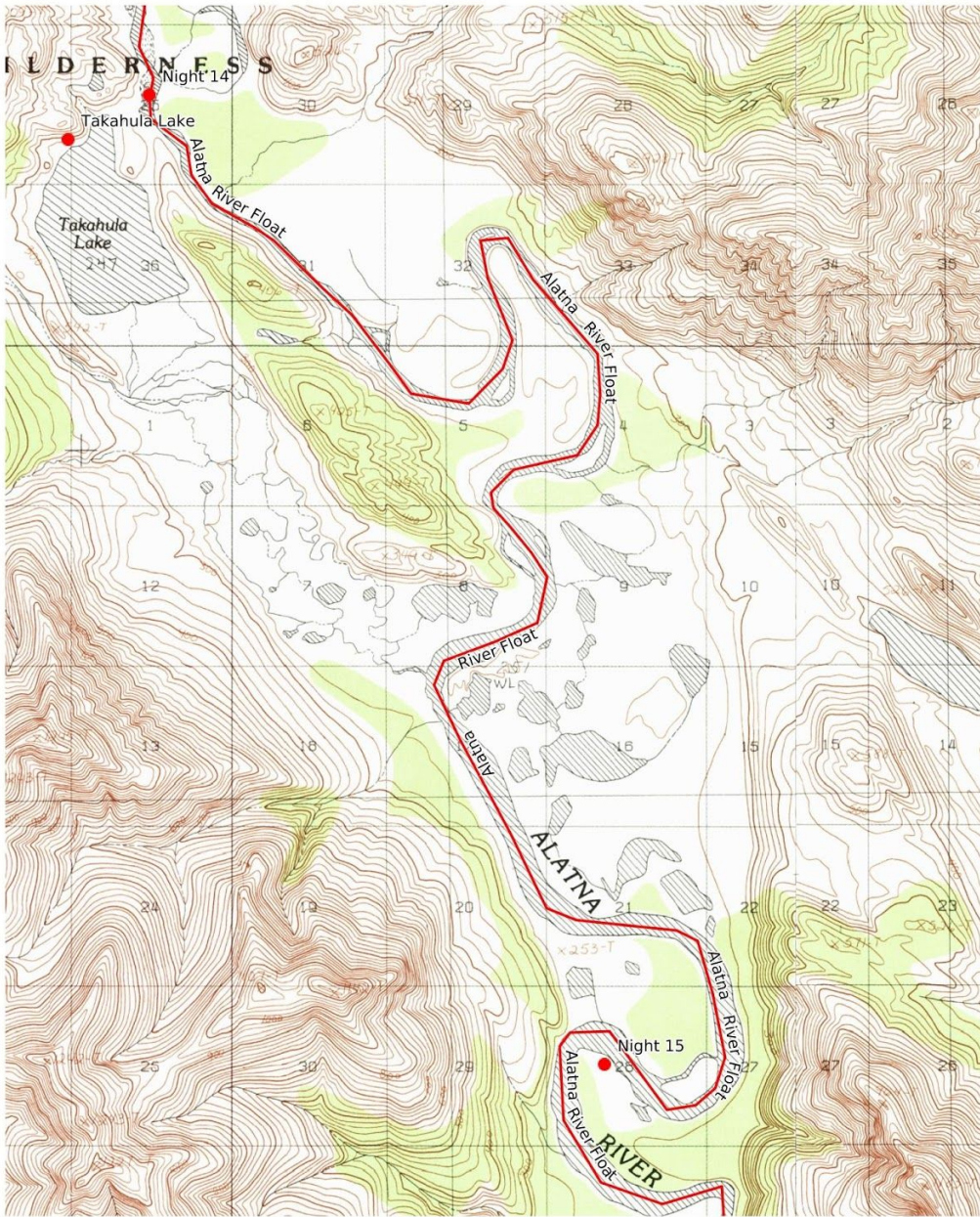
Day 15: 8/19

Paddle 12.7 miles and camp on the southwest side of the river. Steep mountains rise from the east and west shores of the river in this location, but meanders in the river create flat pockets for camping. This will be our last night within the boundaries of Gates of the Arctic National Park, and we will camp near the boundary.

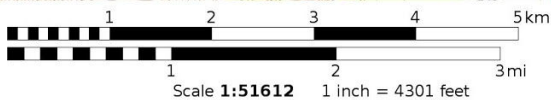
Camp coordinates:

67.2776, -153.5474

5W 0476405E 7462427N



Mercator Projection
WG584
USNG Zone 5WMQ
CalTopo.com



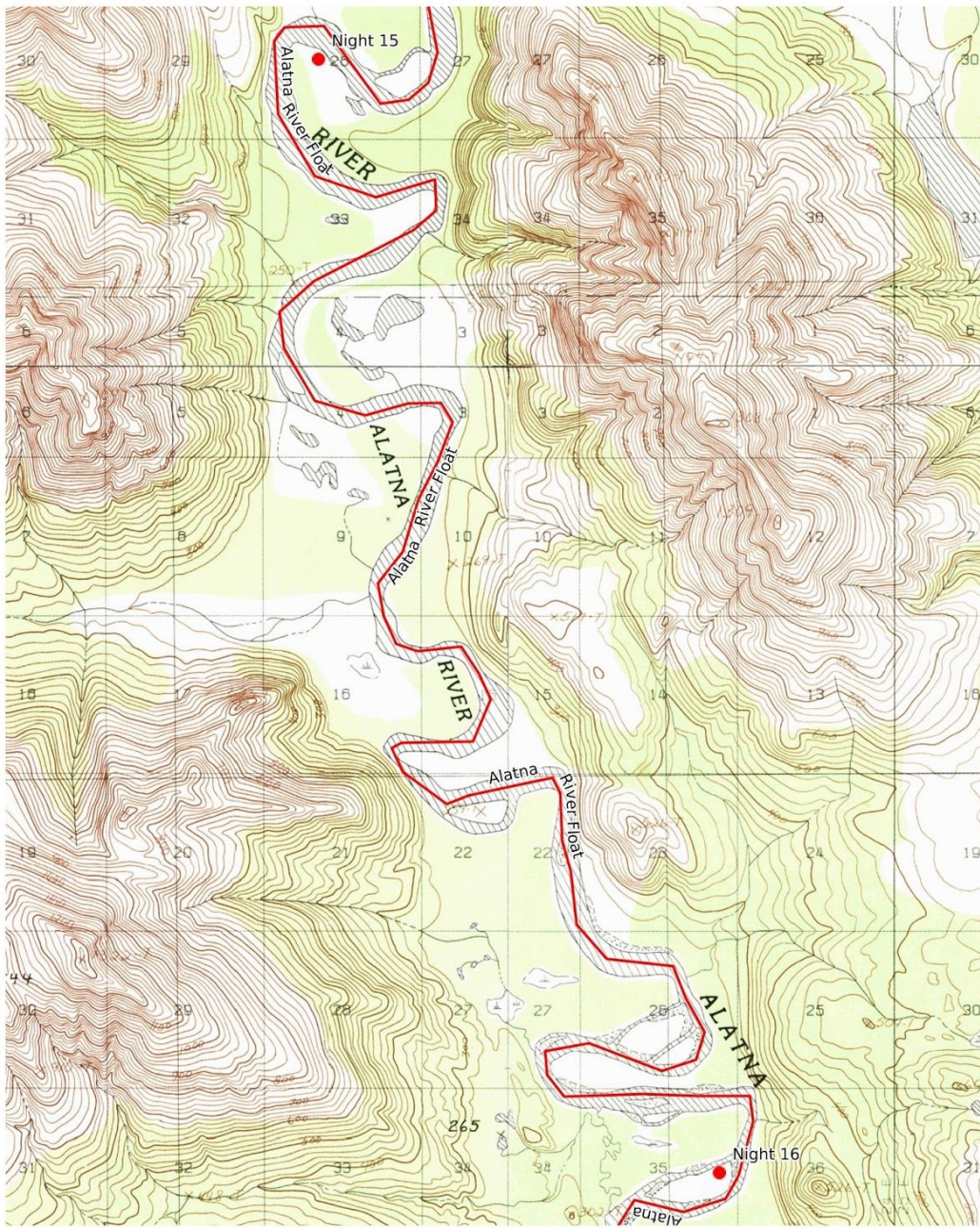
Day 16: 8/20

Paddle 14.8 miles and camp on an island between two channels of the river. In the case of high water flooding the island, there is also possible camping on both shores, although the vegetation is denser.

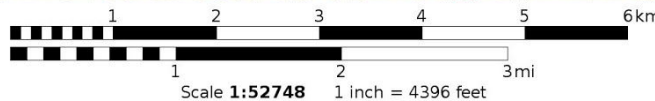
Camp coordinates:

67.1759, -153.4524

5W 0480415E 7451057N



Mercator Projection
WGS84
USNG Zone 5WMQ
CalTopo.com



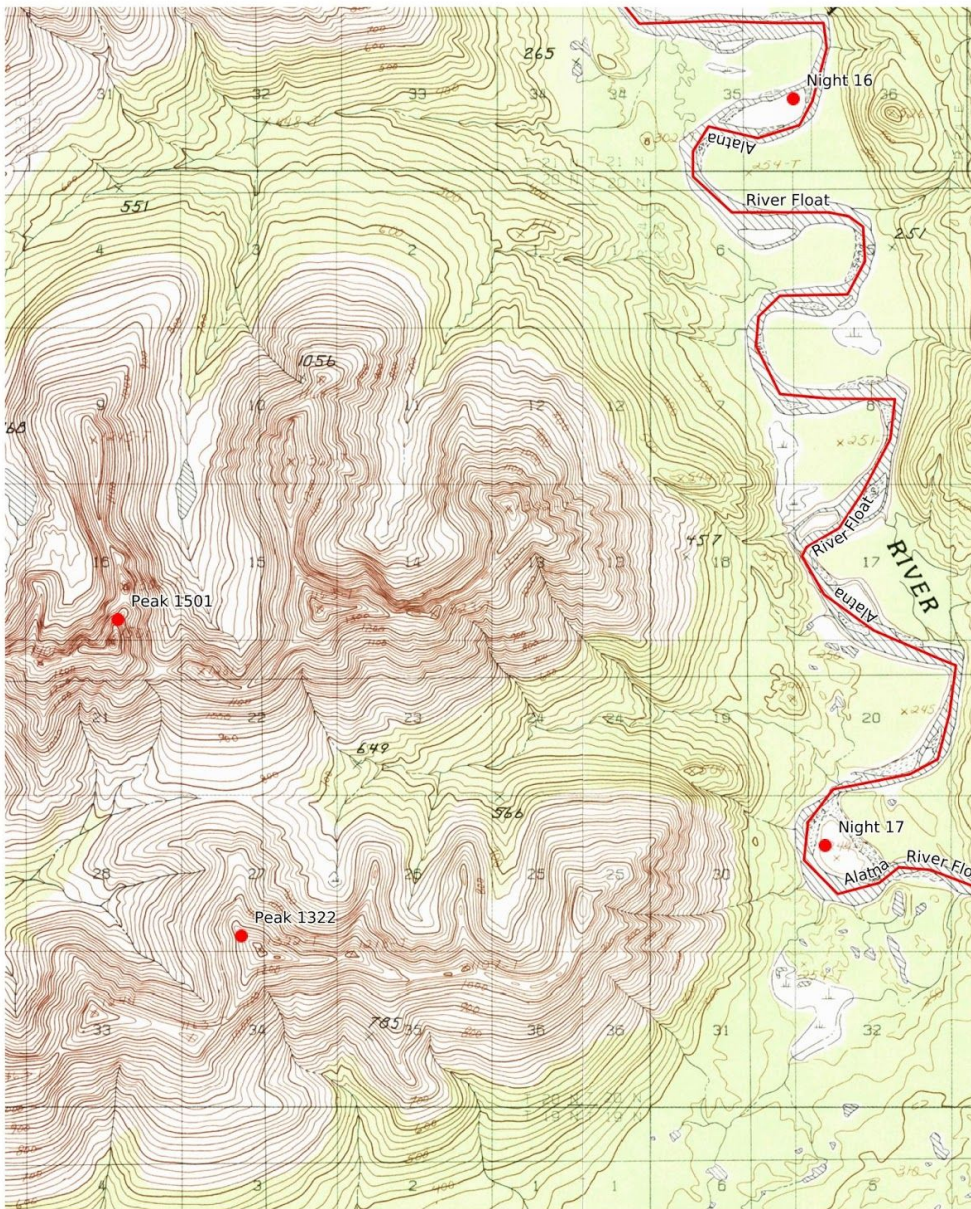
Day 17: 8/21

Paddle 8.8 miles and camp on a sandy island in the river. In the case of high water flooding the island, there is also possible camping on the east shore, although the vegetation is denser. This is a shorter day and provides the opportunity to hike around and explore the mountains just west of our campsite. A valley runs west from the river to a pass between peak 1322 and 1421. We will not do any technical climbing.

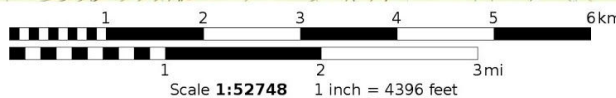
Camp coordinates:

67.1069, -153.4448

5W 0480693E 7443365N



Mercator Projection
WGS84
USNG Zone 5WMQ
CalTopo.com



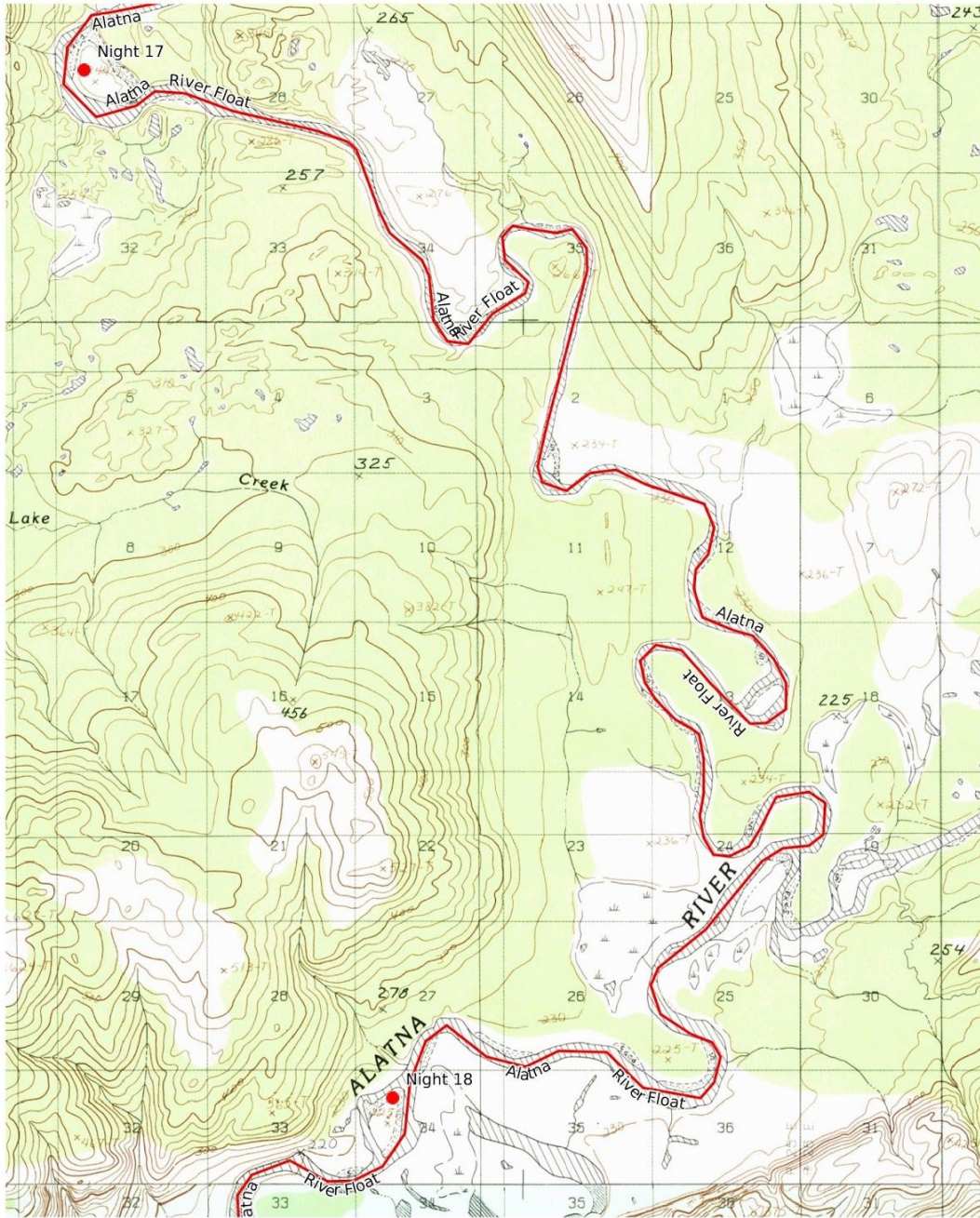
Day 18: 8/22

Paddle 19.8 miles and camp on a sandy island. In the case of high water flooding the island, there is also possible camping on the west shore, although the vegetation is denser.

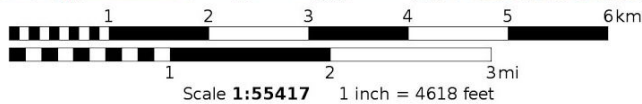
Camp coordinates:

67.0078, -153.3683

5W 0483945E 7432299N



Mercator Projection
WGS84
USNG Zone 5W MQ
CalTopo.com



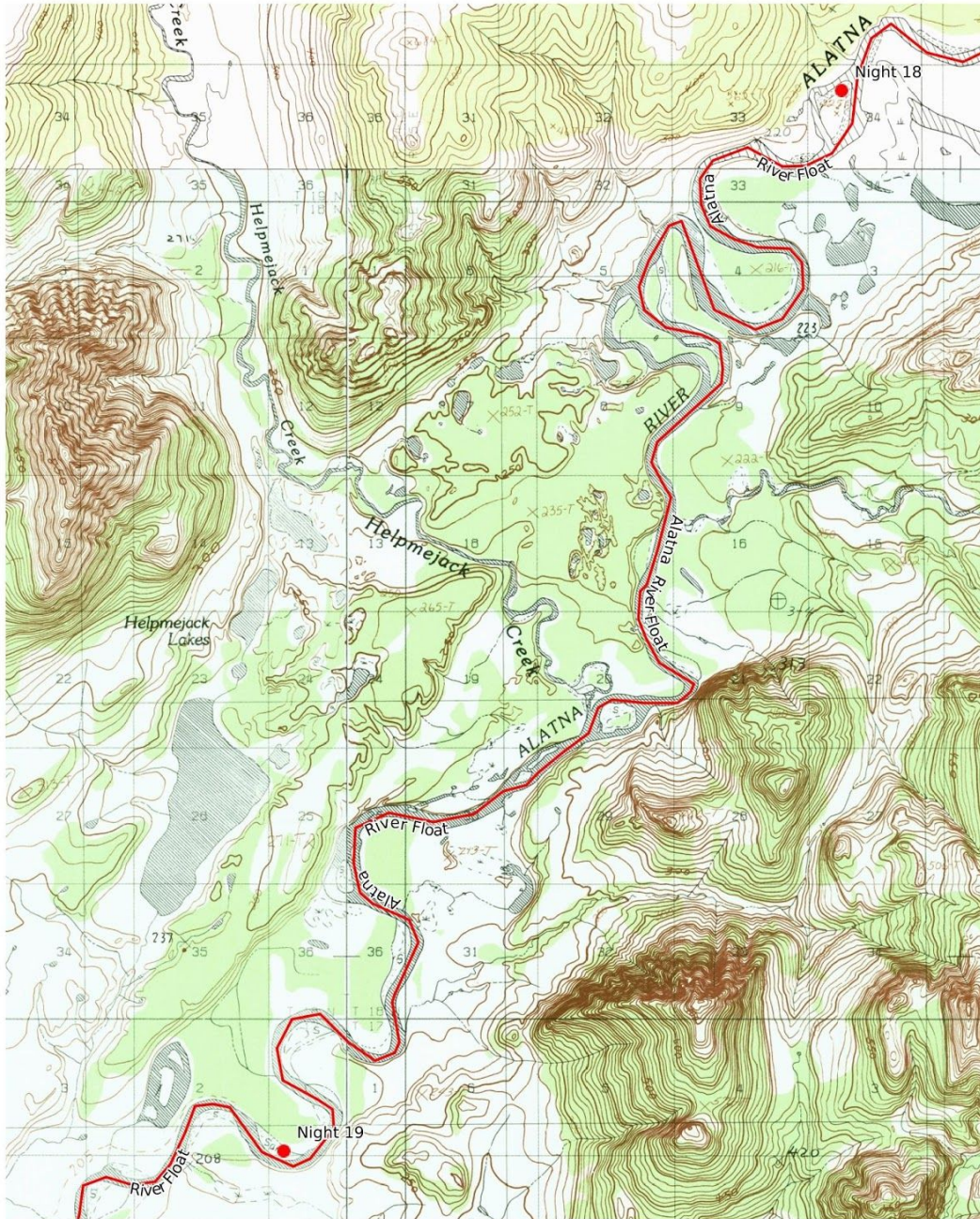
Day 19: 8/23

Paddle 16.0 miles and camp on a sandy beach on the northwest shore of the river, just south of Helpmejack Lakes.

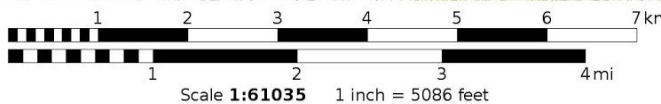
Camp coordinates:

66.8955, -153.5198

5W 0477239E 7419827N



Mercator Projection
WGS84
USNG Zone 5WUQ
CalTopo.com



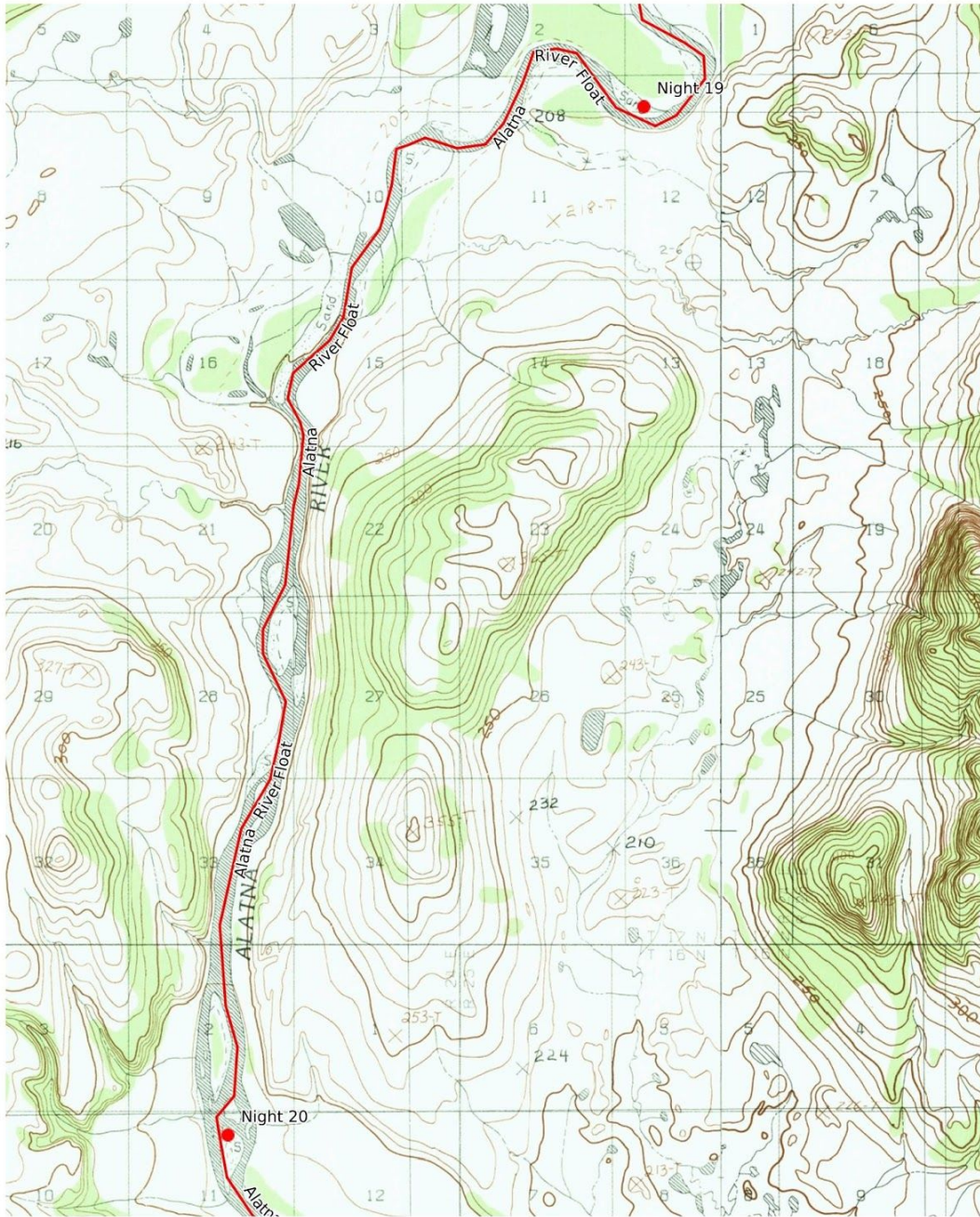
Day 20: 8/24

Paddle 8.5 miles and camp on a sandy island in the river. In the case of high water flooding the island, there is possible camping on both shores, but camping on islands is more fun.

Camp coordinates:

66.8064, -153.6116

5W 0473119E 7409926N



Mercator Projection
WGS84
USNG Zone 5WMQ
CalTopo.com



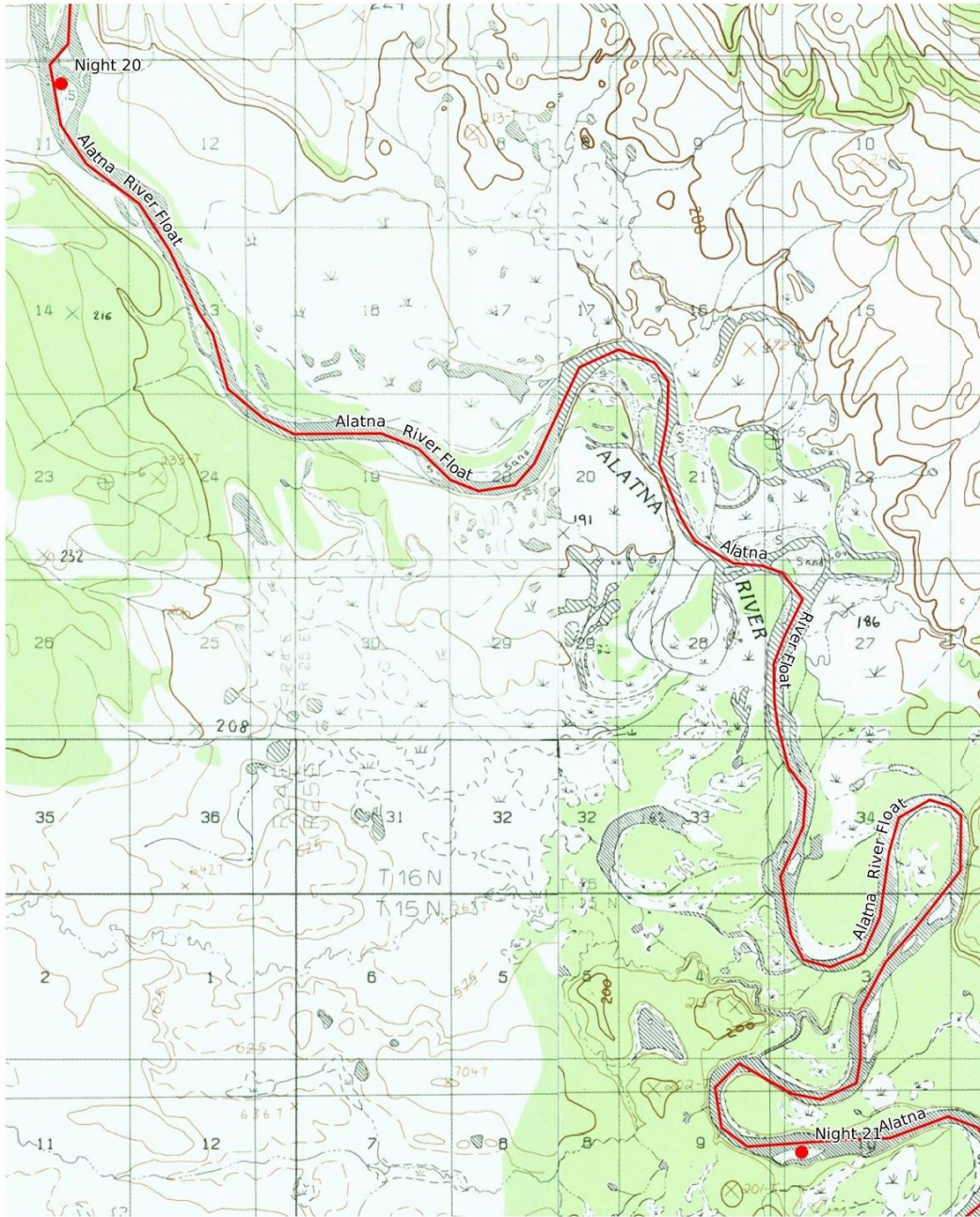
Day 21: 8/25

Paddle 14.0 miles and camp on a sandy shore on the southwest bank of the river. This is a marshy area, and we will want to use mosquito protection here.

Camp coordinates:

66.7138, -153.4490

5W 0480195E 7399546N



Mercator Projection
WGS84
USNG 5WMP-5WMQ
CalTopo.com



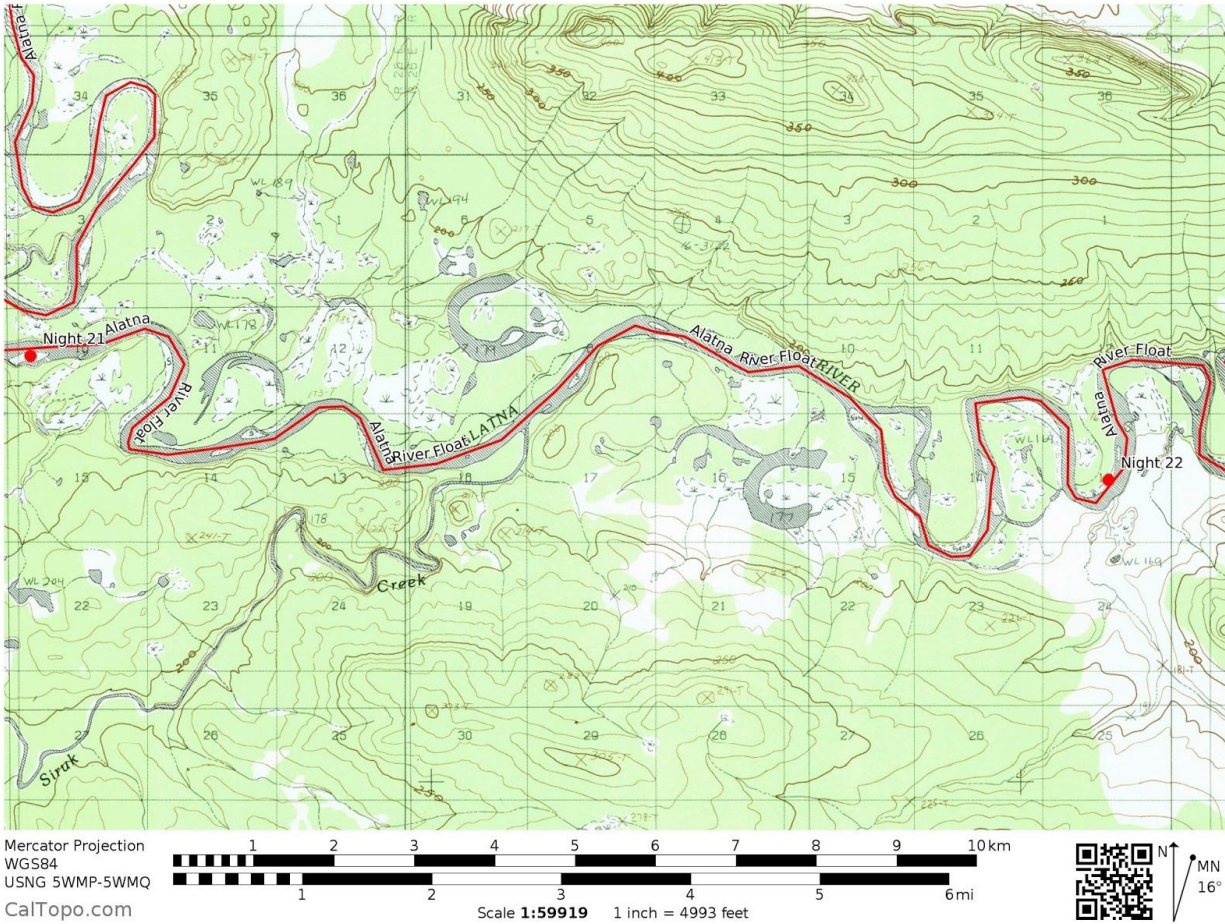
Day 22: 8/26

Paddle 14.1 miles and camp on a sandy shore on the north bank of the river.

Camp coordinates:

66.6999, -153.1444

5W 0493625E 7397933N



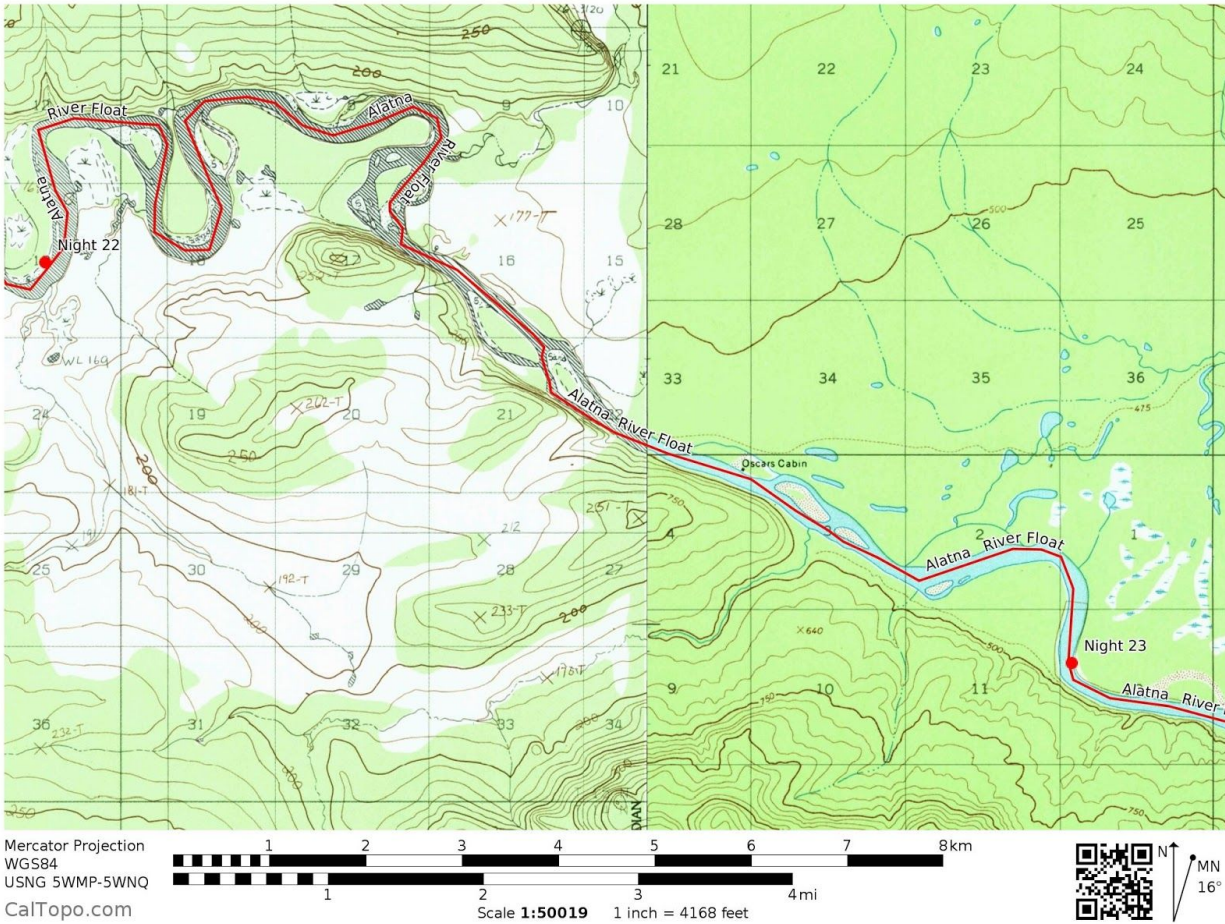
Day 23: 8/27

Paddle 12.4 miles and camp on a sandy shore on the east bank of the river, just past Oscar's Cabin.

Camp coordinates:

66.6625, -152.9026

5W 0504307E 7393766N



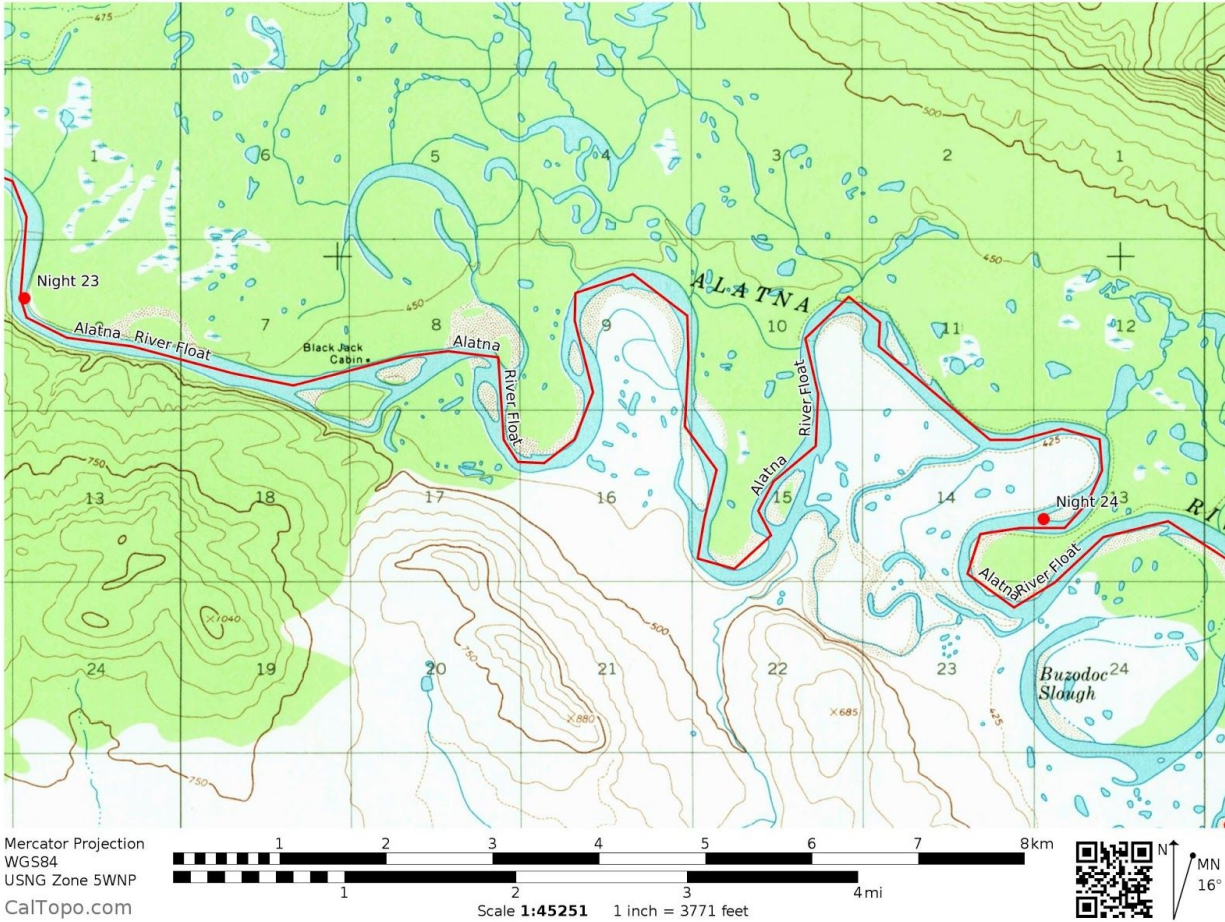
Day 24: 8/28

Paddle 11.6 miles and camp on a sandy island in the river. In the case of high water flooding the island, there is also possible camping on both shores, although the vegetation is denser.

Camp coordinates:

66.6439, -152.6855

5W 0513913E 7391720N



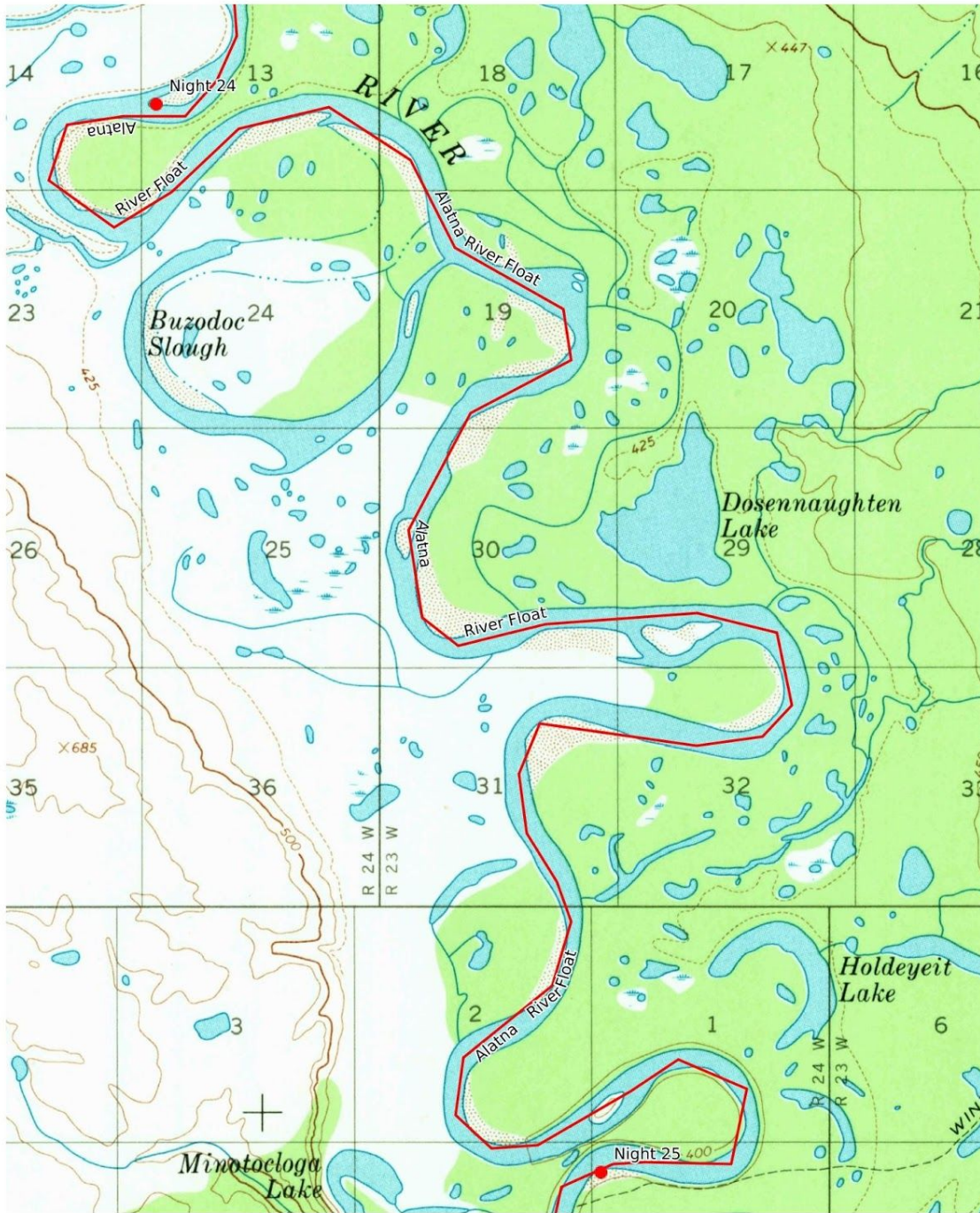
Day 25: 8/29

Paddle 12.4 miles and camp on a sandy shore on the southeast bank of the river.

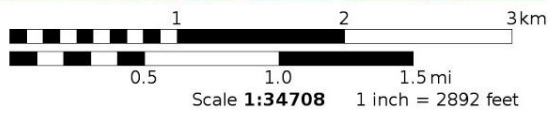
Camp coordinates:

66.5792, -152.6175

5W 0516966E 7384524N

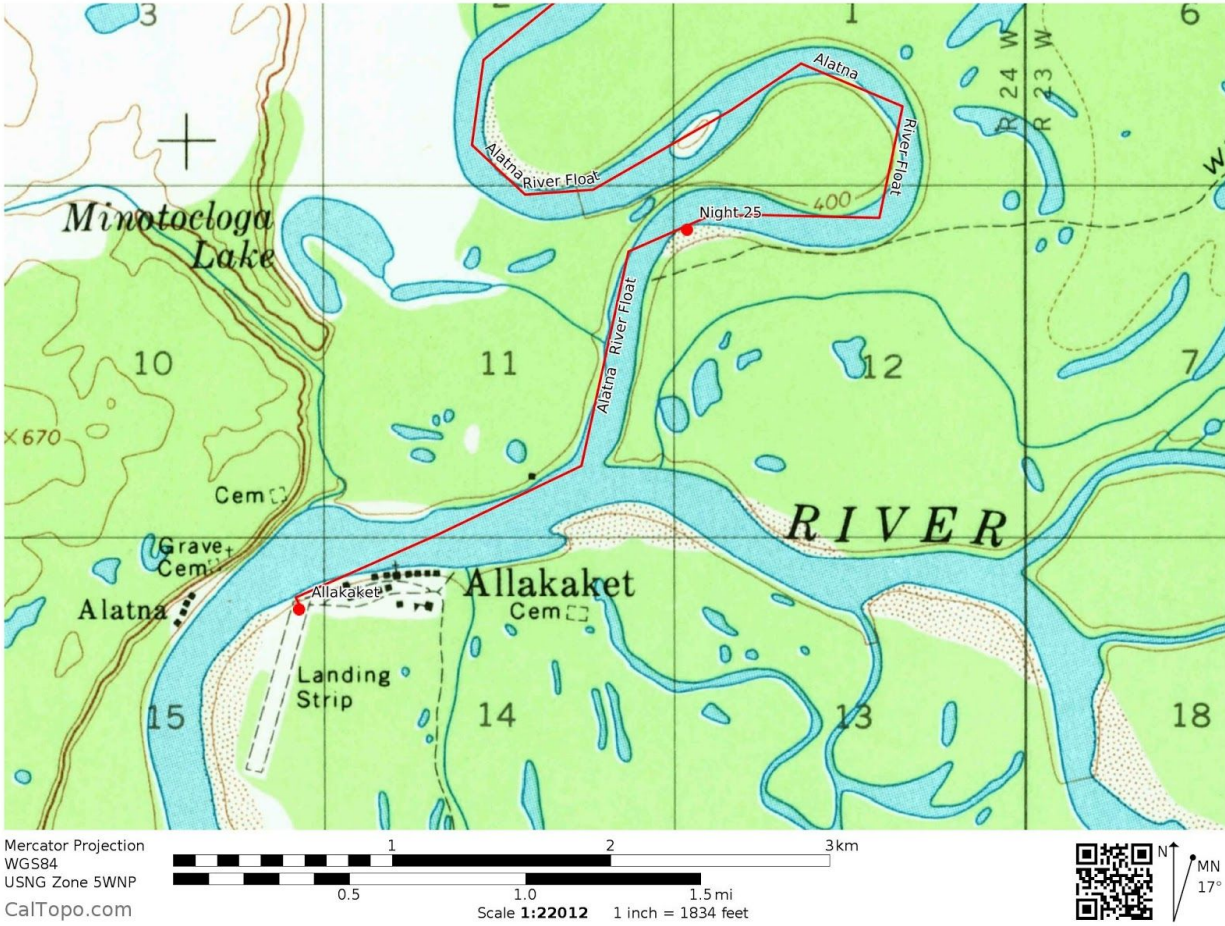


Mercator Projection
WGS84
USNG Zone 5WNP
CalTopo.com



Day 26: 8/30

Paddle the last 1.7 miles of our trip to the town of Allakaket. We will pack up our boats and fly out of Allakaket to Fairbanks that afternoon. This concludes our trip!



Appendix B- Equipment

Backpacking: Individual Gear

Upper Layers

- 1-2 Synthetic T-shirts
- 1 Base Layer (Long Underwear Top)
- 1 Fleece
- 1 Soft Shell
- 1 Heavy Insulated Jacket (Puffy)
- 1 Raincoat (Goretex)

Bottom Layers

- Synthetic Underwear
- 1 Base Layer (Long Underwear Bottoms)
- 1 Pair of Fleece or Insulated pants
- 1 Pair of Rain Pants
- 1 Pair of synthetic pants

Footwear

- 3-4 Pairs of Wool Hiking Socks
- 1 Pair of Approach/ Hiking Shoes
- 1 Pair of Camp Shoes (closed-toe sneakers or cros)

Miscellaneous Clothing

- 1 Sun Hat or Baseball Cap
- 1 Fleece or Wool Hat
- 1 Pair of Fleece or Wool Gloves

Sleeping Gear

- Sleeping Bag (rated to 0-15 degrees Fahrenheit)
- Sleeping Pad
- Sleeping Bag Compression Stuff Sack

Packs and Bags

- Internal Frame Pack (Volume of 5,000 to 7,000+ cubic inches)
- Small Stuff Sacks
- 1-2 Waterproof Bag Liners (trash compactor bags) OR Rain Cover for Backpack
- Trekking Poles

Miscellaneous Items

- 1 Waterproof Watch with Alarm
- 3 Headlamps with extra batteries (one of which will be in climbing pack)
- 1 Pair of Sunglasses
- 1 Compass with Mirror
- 1 Pocket Knife

1 Whistle
1 Camping Bowl
1 Plastic Spoon
1 Insulated Mug
2-3 1-Liter Water Bottles
SPF Lip Balm
Toothbrush/Toothpaste

Backpacking Group Gear

1 4-person tent (body, rain fly, stakes)
Tent repair kit
1 Bear fence, with extra batteries
2 packraft repair kits
2 spare packraft paddles
P-chord
Dromedary
Duct tape
Small sewing kit
1 MSR Pocket Rocket
1 Jetboil
10 16 oz. IsoPro fuel canisters
3 Lighters
1 Pot
1 Pan
Cooking utensils
10 bear canisters/ bags
Sunscreen
Hand sanitizer
3 cans of bear spray
1 trowel
Water purification- 10 bottles of iodine
Maps (2 copies of each)
Topos (2 copies of each)
2 InReach Devices
1 Satellite Phone
2 charging banks

First Aid Kit

General Supplies

Nitrile Gloves: 5 pairs
12 cc irrigation syringe: 1
Trauma shears: 1
Tweezers: 1
SOAP notes: 5
Safety Pins: 6

WFR Book: 1
Ziplock bag: 4
Emergency Blanket: 2

Drugs/Meds

Ibuprofen: 60 pills
Pepto Bismol: 30 pills
Acetaminophen: 30 pills
Tincture of Benzoin: 5 ampules
Iodine towelettes: 10
Triple antibiotic ointment: 1 tube

Wound Care/Bandaging

Antiseptic towelettes: 25
3" conforming gauze roll: 4
3 x 3" sterile gauze pads: 5
2 x 3" non-adherent dressings: 3
3 x 4" sterile gauze pads: 5
Trauma Pads: 4
Transparent Dressing: 4
Closure strips ("steri-strips"): 3 sets of 4+ strips
Ace Elastic bandage: 3
Triangular bandage: 5
2nd Skin 2 x 3 pad: 6
Band-aids: 10
Butterfly bandages: 5
Sterile Cotton Tipped Applicator: 10
1" tape roll: 1
1.5" Athletic tape roll: 2
Moleskin 2 x 3: 6

Individual Climbing Gear:

1 harness
1 helmet
1 pair of climbing shoes
1 ATC Guide or Reverso with locking HMS carabiner
1 Personal Anchor System (PAS)
1 Prussic cord, triblock, or both
1 Double length runner
1 Extra Locking carabiner
1 Chalk bag
1 nut tool
Athletic tape
1 20L climbing pack

Personal River Gear:

- 1 Packraft
- 1 Paddle
- 1 PFD
- 1 Helmet (if climbing helmet is ALSO certified for “whitewater sports,” a special river helmet is not required)
- 1 Drytop/bottoms
- 1 Fleece top and bottom to wear while paddling
- 1 Throw-rope
- 1 River Knife and whistle attached to PFD
- 1 Large Drybag
- 1 Small Drybag
- 1 Pair Neoprene booties

Group Climbing Gear:

- 2 70M twin/half climbing ropes
- 1 rack of singles of BD Camelot C4 .2-3, with Doubles of .75-2
- 2 Sets of stoppers (1 set tapered, 1 set offset)
- 2 20 ft 7mm cordelette
- 7-9 locking carabiners
- 4 quickdraws
- 10 alpine draws (8 single, 2 double)
- Approximately 60 ft of 5mm accessory cord for making emergency rappels, and performing standard rescue rope procedures (ie. spider anchor buddy rappels, escaping belays...) also for the bear hangs
- 2 rescue knives (for cutting accessory cord or pre-existing cordage on route if necessary)

Appendix C- Food

FOOD	POUND	PRICE/LB	TOTAL(\$)
Breakfast:	Pounds	Price/LB	Total(\$)
Granola	16	\$5.04	\$80.64
Hash Browns	8	\$5.33	\$42.64
Oatmeal	8	\$3.80	\$30.40
Poptarts	4	\$3.53	\$14.12
Lunch:			\$0.00
GORP Mix	8	\$7.22	\$57.76
Dried fruit	12	\$8.41	\$100.92
Cashews	4	\$8.16	\$32.64
Peabut Butter	12	\$7.50	\$90.00
Beef Jerky	20	\$10.69	\$213.80
Chocolate	4	\$9.94	\$39.76
Summer Saus	8	\$9.40	\$75.20
Sharp Chedda	8	\$22.00	\$176.00
Pita Bread	8	\$2.10	\$16.80
Bars	10	\$8.00	\$80.00
Dinner:			
Ramen	6	\$1.45	\$8.70
Rice	16	\$2.70	\$43.20
Indian Fare	18	\$9.70	\$174.60
Potato Pearls	8	\$3.00	\$24.00
Dried Veggies	8	\$7.82	\$62.56
Pinto Bean Fla	8	\$6.74	\$53.92
Pasta	8	\$3.00	\$24.00
Sauce Mix	4	\$4.00	\$16.00
Drink Mixes			\$0.00
Coffee	10	\$7.50	\$75.00
Electrolyte Mix	4	\$8.30	\$33.20
<u>Totals</u>	<u>103</u>		<u>\$1,565.86</u>

Appendix D- Budget

Transportation

In the space below, write the total Transportation cost for your expedition in US dollars.

\$2,500 for round-trip flights to Fairbanks

\$424 for bus to Coldfoot

\$1,700 for flight from Coldfoot to Circle Lake

\$680 Flight from Allakaket to Fairbanks via Wright Air Service

Food and Fuel

In the space below, write the total cost of Food and Fuel for your expedition in US dollars.

Food: 1,565.86

Fuel: 101.30

Iodine (3 L/per/day x 2 tablets/ L x 4 per. x 25 days / 50 tab/ bottle= ~12 bottles, \$6.95x7)-
\$83.40

Maps and Books

In the space below, write the total cost of Maps and Books for your expedition in US dollars.

Free maps are available at the ranger station in Fairbanks

Communication Device Rental

In the space below, write the total cost of renting a Communication Device for your expedition in US dollars.

\$120

An additional inReach will need to be rented for communication between climbing and hiking teams.

Permits/Fees

In the space below, write the total cost of Permits/Fees for your expedition in US dollars.

\$0, There are no permits or entrance fees into Gates of the Arctic National Park

Gear Rentals

In the space below, write the total cost of any Gear Rentals for your expedition in US dollars.

\$3,550 for packrafts

\$160 for bear fence rental

Total Funding Request

In the space below, write your Total Request for Funding.

(If trip is 12-20 days request is not to exceed \$1500, if trip will be longer than 21 days it may be eligible for up to \$2500 funding)

Total: \$10,885

Total Funding Requested Per Person: \$2,500