



Ritt Kellogg Memorial Fund Registration

Registration No. 7HL6-BDCQX

Submitted Feb 3, 2022 11:07am by Kate Macklin

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Registration

Jul 1, 2021-Jan
26, 2022

Ritt Kellogg Memorial Fund

Registered

RKMF Expedition Grant Group Application 2021-22

This is the group application for a Ritt Kellogg Memorial Fund Expedition Grant. In this application you will be asked to provide important details concerning your expedition. In addition to this Group Application, each team member must submit an Individual Application. All Group Applications and Individual Applications must be received by Wednesday, January 26th at noon. For more information, example applications, proposal writing tips, and further guidance, please visit <https://www.coloradocollege.edu/other/rittkelloggfund/grants/expedition-grants/overview.html>

Note: For the 2020-2021 application year, the following additional parameters have been established due to the COVID-19 pandemic: - 2021 RKMF grants are limited to travel in the contiguous United States only (no Alaska, no Hawaii, no Canada). 2021 RKMF grants are limited to travel by personal vehicles only (no airplanes, buses or other forms of public transportation) - An additional COVID-19 preparedness section has been added to the Group Application - Expedition teams which receive funding must submit an updated COVID-19 preparedness form 3 weeks prior to their expedition If you have any questions please email Kate Macklin, Outdoor Education and Ritt Kellogg Memorial Fund Coordinator, at kmacklin@coloradocollege.edu

Participant



Devan Udall



Expedition Summary

Expedition Name

Packrafting in Gates of the Arctic

Alternate Expedition Name

Two Bubby Blokes Tackle Two Great Rivers

Objectives

Our expedition will consist of packrafting 50 miles on the Alatna River from the headwaters, traversing 60 miles east by foot to the John River, and returning to our packrafts to float 100 miles downriver to the Koyukuk confluence. Looking forward to the trip we have envisioned, the main objective is to create and actualize an adventure that tests the bounds of what we know, who we are, and what we are capable of. The Gates of the Arctic is notorious for being seldom traveled, and remarkably beautiful. Having the opportunity to experience this place as one of the great wild lands on earth would be an immense gift.

Our itinerary consists of several different sections, each with their distinct advantages and challenges. The upper Alatna River offers 40 miles of fun class II whitewater in a stunning alpine tundra setting, a modest but exciting river section of wild and winding beauty. We'll take a quick detour to hike up and see the Arrigetch Peaks, a must-visit cirque of towering peaks and cliffs. The 60-mile portage to the John River will no doubt be the most strenuous and remote portion of our journey, presenting a physical and navigational challenge we are excited to greet. We'll finish by floating the John River at a relatively casual pace, taking advantage of every opportunity to side-hike and explore this magical river canyon and surrounding landscape.

In the long term, we seek to take our established paddling and backcountry skills into increasingly remote and rugged areas, and this trip is a meaningful step in that direction. We hope that in pushing our abilities within the packrafting expedition format, we are able to come out of this experience feeling more prepared for longer trips with more challenging terrain and

whitewater. Having both spent quite a bit of time backpacking and paddling, this trip would engage and strengthen the skills and knowledge that we have, while pushing us to orient to a new landscape of unparalleled wilderness. We are particularly drawn to traveling long distances by remote rivers, and the experience gained from preparing for and executing this expedition will be incredibly valuable for future endeavors.

In proposing a three week trip, we intend to immerse ourselves fully in the rhythms of a life undisturbed by human hands. There is a great appeal to venturing into a place as raw and rugged as Gates of the Arctic, where the act of living itself requires all of your attention and care. Through paddling pristine waters and traversing age-old mountain ranges, we will learn to rely on the relationship that we cultivate within ourselves and with the land to deepen our sense of place, and trust within it. We wish to fully attune, for a short and sweet time, to what the wilderness can offer for the human soul.

Location

Gates of the Arctic National Park is located in Northern Alaska, and is made up of millions of acres of incomparable wilderness. Only approachable by foot or plane, Gates of the Arctic is one of the least traveled parks in the park system. Gaedeke Lake is located in the Southern Brooks Range, and sits near the headwaters of the Alatna River. Flowing South, the Alatna has been designated a Wild and Scenic River, and is said to be one of the most beautiful rivers in the United States. After 50 miles of class I and II whitewater, we will begin our 60 mile trek eastward along river valleys, until we meet the John River. The John River is another renowned Wild and Scenic River located within the Southern bounds of Gates of the Arctic National Park, and will carry us down 100 miles of class I and II whitewater South until we reach the small settlement of Bettles.

Departure Date

Jul 19, 2022

Return Date

Aug 10, 2022

Days in the Field

23

Wilderness Experience



Many people who are seeking the ultimate wilderness experience turn to Alaska as a destination to fulfill such dreams. The vast expanse is compelling and full of enough risk to make the pursuit of Alaskan wilderness feel like the liberating adventure of a lifetime. The Gates of the Arctic, as mentioned above, is visited by very few people, maintaining its sense of remoteness and wildness. The weather is unpredictable, the wildlife is abundant, the solitude is unavoidable, and the ongoing variables require an irrevocable humbling amidst the power of this landscape.

The value and necessity of true wilderness is tragically overlooked in the fast-paced, consumerism-based structures that surround and define much of our lives today. So much of our world's confusions are exposed in a place decidedly stark and extreme, beyond the prevalent obsessions with money, speed, and machines. The Gates of the Arctic is a place that will without fail, bring to the surface the true struggles and ambitions of a human being.

A place this remote and forceful demands readiness to draw from deep within, to trust the resilience of oneself, and to test the character and grit that become essential when all else fails. It is without question that we will face unexpected circumstances when venturing into landscapes like the Brooks Range, but within that lies one of the greatest pulls. It is an unavoidable truth that the wilderness experience is constructed from the building blocks of uncertainty. To be absolutely present in the depths of the wild, cherished by the ridges, comforted by the watercourses, and lost in such wonder is a brave and radical journey that this expedition will engage.

Participant Qualifications

Expedition Team Member Graduation Dates

Devan Udall - 
Zinnia Voss - 

Medical Certification Dates

Devan Udall - 1/23/24
Zinnia Voss - To be determined (refer to individual application for details)

Does your group have adequate experience?

Yes

Training Plan

General Training:

The trip that we are proposing will demand a high level of physical strength and preparation. Throughout this spring we are devising plans to build our agility and physicality so that we are ready to embark on this expedition with the hardiness necessary to minimize risks in transition and injury. Making sure that our bodies are physically fit, and that we have gathered as much knowledge pertaining to the landscape, wildlife, and weather of the area as possible, will ensure that the greater majority of our energy can go towards responding to unpredicted scenarios.

To engage in general and consistent cardio and strength training throughout the spring, we will spend time on runs, biking, and climbing. There are a plethora of trails in the area such as the Tiger Trail, trails around Garden of the Gods, Cheyenne Canyon, Red Rocks Open Space, and so on, that we will take advantage of in our daily movement.

Packrafting:

Both Devan and Zinnia have paddling skills adequate for whitewater above the class II that we will see on the Alatna and the John Rivers. That said, we have only taken packrafts out on whitewater once, so it is a relatively new craft for the both of us. As such, much of our training will be dedicated to single- and multi-day packrafting trips in order to learn how to use and maneuver the specific crafts that we will take on our expedition. We will train on whitewater comparable to, and above the grade of whitewater that we plan to paddle in Alaska, beginning as soon as water levels become sufficient in April. Our whitewater packrafting training plan includes (in approximate order):

- Spikebuck - Parkdale (Arkansas River): class II with some mellow class III. ~10 miles. Easy section with very low consequences and more class II-III options above.
- Cemetery (Roaring Fork): class II+. 6 miles, ends near Glenwood playwave, where more whitewater skills can be practiced.
- Shoshone (Colorado River): straightforward big water class III. Devan has run this many times. 2 miles, can be lapped several times.
- Waterton Canyon (South Platte River): creek Colorado class III. Zinnia and Devan are very familiar with this run. 1.5 miles, rapids can be lapped and easily portaged.
- Ruby Horsethief - Westwater Canyon (Colorado River): 25 miles flatwater, followed by big water class III canyon. Both Devan and Zinnia have run this before. 3 nights, 42 miles (7th block break)
- Buena Vista - Salida (Arkansas River): class II and III, including Browns Canyon. Overnight trip, 30 miles.

On each of these trips we will spend time familiarizing ourselves with the cargo fly and internal dry bags, and practice paddling the boats fully loaded with gear. Importantly, we also need to spend significant time learning packraft repairs. The rivers we will be traveling on in Alaska are shallow, and packraft field repair is likely to be required at some point. We will acquire repair materials and educate ourselves using online videos, friends, and CC Outdoor Education as resources. We plan to carry notes on repairs into the field with us as a reference.

Finally, we will both take the swiftwater rescue course offered through CCOE in the spring, which will add an additional layer of fresh and applicable rescue skills. We plan to apply for RKM Education Grants for this course. We plan to rehearse these skills independently after the course at Waterton Canyon and on the Arkansas River. We will practice throwing ropes, Z-drags, self-rescue in small rapids, in-boat swimmer rescue, river fording, etc. This practice will take place in April and May.

Backpacking:

Though our backpacking section feels reasonable and realistic in terms of length and terrain, the Alaskan wilderness undoubtedly requires a level of physical and mental preparedness that can only be established through intentional training. Our backpacks will be holding 8 days of food on top of our paddling gear and everything else. The best way for us to prepare for these conditions is by simulating them before we embark on our expedition. We plan to regularly go on trail runs and day hikes with loaded packs to build general endurance and strength. We also plan on doing a backpacking trip over spring break, with many options to choose from (Elk Creek to Needleton Loop, Four Pass Loop, Missouri Lakes and Fancy Pass Loop, Lost Creek Wilderness Loop). All of these, weather permitting, will offer immense training in their high altitude and steep climbs. Training in Colorado will be a step ahead of the game, as we will be building strength and cardio at much higher elevations than we will see in Alaska. Our highest elevation will be 3350', so any training between 6,000'-14,000' will be advantageous. Additionally, in the weeks just before the expedition, Zinnia will be leading backpacking trips at a summer camp in the Sierras at 8500', and Devan will be trekking for 3 weeks in the Himalayas with a CC course.

From a more technical standpoint, we will want to make sure our off-trail navigation skills are fresh. We are planning a two-night off-trail backpacking trip on the west side of Pikes Peak above treeline in order to practice map reading, triangulation, taking visual bearings, and compass skills.

Mental Preparation:

The physical level of preparedness and training required to embark on an expedition of this caliber is much more commonly stressed than the mental aspects. It can be easy to push aside the risks of negating physiological/inner training as it is less tangible, but it is crucial all the same. We plan on taking time to assess what could come up internally on a trip of this intensity, and research/establish tools to count on when these things occur. There are many potential risks not only physically, but

mentally as well. The effects of unpredictable weather, dangerous wildlife, and mental exhaustion are all things that need to be understood and considered as thoughtfully as the risks and danger of injury. Forethought in this will mitigate potential for heightened anxiety/ loss of motivation/ etc. It will also strengthen our ability to work through things as a team which is extremely necessary in the remote backcountry.

Expedition Logistics, Gear and Food

Travel Plan

Both Devan and Zinnia will meet in [REDACTED] and fly out of [REDACTED] on July 18th, layover in Seattle, and continue on to Fairbanks. From Fairbanks we will take a smaller plane with Wright Air to get to the town of Bettles. We will have the afternoon in Bettles to arrange our gear, food, and resupply box before we head to the backcountry. On the morning of July 19th, we will take a float plane with Brooks Range Aviation to Gaedeke Lake to begin our expedition.

We will float back into Bettles from the John River on August 10th, 23 days later, where we will spend the night to debrief. The morning of August 11th, we will fly with Wright Air again, back to Fairbanks. From there, we will have the afternoon and evening before our red eye flight departs at 1am on the morning of the 12th. Devan will fly back to [REDACTED] with a layover in Seattle, and Zinnia will fly back to [REDACTED] also with a layover in Seattle. If our flight out of Bettles on the 11th happens to be pushed back to the following day due to bad weather, our Alaska airlines tickets will be easily transferable at minimal or no extra cost.

Expedition Itinerary

[Itinerary.pdf](#) (92KB)

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Digital Map

<https://caltopo.com/m/QHU2B>

Re-Ration Plans

We will need to re-ration our food on the morning of day 16, of our 23 day expedition, at Hunt Fork Lake before we begin our paddling section on the John River. We have already talked to Brooks Range Aviation who agreed to do our food drop for us. Because we will be getting our food via float plane, there will be very little interaction and it will be a quick transaction. The food will already be prepared for the drop, and the pilot will only need to hand us the bag before taking off again. This brief transaction will occur outside, largely mitigating any risks of COVID-19 exposures.

Food Storage

We plan on using hard-sided bear canisters (BearVault BV500) freely distributed at the Bettles NPS ranger station for the length of our expedition, and will use Ursacks (15L All-Mitey XL) for any excess food during the beginning of our first 15-day leg. The bear canisters provided by the NPS and the All-Mitey Ursacks are adequate for grizzly country, and approved by the national park. We will store any food that is not actively being prepared or eaten in bear canisters at a site at least 300 feet downwind from camp. We will always cook in a separate nylon tarp-tent (mounted with poles and P-cord) that is also located 300 feet downwind of our sleeping tent, and store this tarp safely with our food at night. These will be lodged between rocks or logs where they are hard to access. For the first part of the 15-day leg, storing some food in Ursacks will be necessary, as our two canisters will not have enough space. Ideally, our Ursacks are properly hung in trees (at least 12 feet off the ground and 5 feet from the trunk), or alternatively, nudged between rocks or logs. This latter option may be used most frequently for both our canisters and Ursacks, as trees large enough for proper bear hangs can be hard to find in many areas we'll be traveling through. While on our trek into the Arrigetch valley, we will leave excess food near the river in order to lower the weight we have on our backs. For these 2 nights, we will properly hang any gear left behind, and cache food in canisters lodged between rocks.

Note: While boating, bear canisters will be strapped to the stern of the packraft, as opposed to placed inside the tube, to avoid damage to the craft.

Food List

[Food .pdf](#) (60KB)

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Equipment List

[Equipment .pdf](#) (57KB)

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First Aid Kit List

[First Aid.pdf](#) (45KB)

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Impact

The Brooks Range harbors stories of over 10,000 years of human history, and has been home to native Alaskan people for millennia. Although there was little evidence of inhabitants, recently discovered artifacts are revealing more information about these early periods of human presence. The late 1880's brought a flow of European travel to the area, included were gold prospectors, scientists, military personnel, and so on. They found their way to the Brooks Range and by the 19th century gold rushes began to shift the traditions and lifestyles known to Native Alaskans. The caribou decline and new diseases brought by the white colonists began to bridge the old Inuit traditions with those adopted by traders and whalers. The harsh and extreme conditions ultimately steered white settlers away from establishment, and any small developments quickly fell away leaving the landscape more or less unaltered.

Today, Gates of the Arctic National Park and Preserve is seen as a legislative achievement to ensure the protection of natural and cultural resources in these areas. The National Park's website emphasizes the importance of visitors to Gates of the Arctic as a way to bring people close to the wilderness and the thousands of years of history that is wrapped up in it. However, it is important to recognize that in protecting lands with designations such as National Park status, the original inhabitants of that land are essentially being dispossessed. While it is a legislative achievement to protect the Brooks Range against environmental degradation, it is simultaneously a colonial endeavor to usurp these lands and place them under federal control. As visitors, we hope to be inspired by the wildness of the landscape and the human cultures, past and present, who have resided there, while also being cognizant that we are beneficiaries of a colonial history of land dispossession.

In addition to climate change's disproportionate effects on high-latitude tundra ecosystems, there are some contemporary human impact concerns for this region. Gates of the Arctic National Park and Preserve is becoming sought after for mining purposes, threatening the vast untouched nature of these wild places and the wildlife that reside within them. Mining and road building would threaten the migration of the western arctic caribou, and inevitably cause air, water, and land pollution. Being a conscious visitor will allow us to build awareness through first hand experience, and grant strength in our voices for continued protection of this land and other areas under similar threats.

In terms of ecological concerns, the relatively few visitors this park sees annually results in widely dispersed impact. With only two participants, our impact will remain low with the majority of our travel on the river. Both of us are very familiar with and trained in Leave No Trace principles. We are thoroughly planning ahead through the process of this grant; will travel and camp on durable surfaces whenever possible (gravel bars, firm tundra); will dispose of waste properly by digging 6-8 inch holes at least 200 feet from water sources and pack out any paper and feminine products; we will leave what we find unless we are picking up trash; will minimize campfire impact by cooking with our stove and rarely having campfires; will respect wildlife by educating ourselves on bear safety and respect their habitat/distance when in the wild; and lastly, although it's unlikely we will see anyone, we will be considerate of others by giving them their privacy and solitude within the beauty and remoteness of the landscapes unless they are seeking help.

In getting to these remote landscapes, we have to travel great distances that result in carbon emissions of 9.55 metric tons, equating to \$47.57 in offsetting costs. Air travel will by far be our largest footprint within the frameworks of this expedition.

Risk Management

Objective Hazards

Wildlife:

Seeing bears in Gates of the Arctic National Park is an almost inevitable event, and measures to prevent encounters, or make them as safe and distant as possible, are to be taken very seriously. We will be carrying all food in hard-sided bear canisters or bear-resistant Ursacks at all times for the duration of the trip. We will be making plenty of noise as we travel to give bears notice that we are present, and to avoid a surprise encounter. Whenever possible, we will travel by foot in open areas with wide visibility. Although gravel bars fit this description, they are also more likely to be traveled by bears, so we will be especially vigilant and noisy while traveling by gravel bars. We will avoid traveling during the early morning and late evening hours, when bears tend to be most active. Wherever possible, we will set up camp on vegetated surfaces above the river channel to decrease the likelihood of a bear encounter in their fishing environment. Ideally, our camps will be set up in widely visible spaces, away from any recent signs of bears (scat, tracks, carcasses) and common foraging areas (sedge meadows, berry patches). At camp, we plan to set up a triangle with our sleeping tent, cooking tarp, and gear/food storage area forming the 3 points (separated by 300 ft.), and the cooking tarp placed downwind of the other two. Food will always be prepared and eaten in the cooking tent only, and stored in bear canisters or hung in Ursacks at least 12 feet off the ground and 5 feet from the trunk whenever possible. The tarp will be stored in one of our bear-resistant containers along with our food at night. Important gear like packrafts and drysuits will be folded and tucked away from the food and smellables to avoid damage by any wildlife.

If we do encounter a bear at a safe distance, we will change course or navigate around the bear allowing it/us to pass undisturbed. The NPS website recommends speaking calmly to the bear and slowly waving your hands above your head. If

the bear begins to focus on or approach us, we will move to stand together and shout, make noise, and wave our arms vigorously. Each of us will carry bear spray that will be kept immediately accessible at all times, as well as air horns to use as noisemakers. If we are charged, we will stand our ground together with packs on and deploy bear spray once the bear comes within 20 feet. If the bear makes contact, we will fight back aggressively. If we encounter a bear by surprise, remaining non-threatening and speaking calmly to the bear while moving backwards diagonally is advised. In this scenario, if a grizzly bear charges it is best to play dead, lying face down with hands clasped at the neck and legs spread apart, and then fight back aggressively if the bear makes contact. In the case of a black bear charge, playing dead is not advised; instead, we would use bear spray and fight back aggressively if contact is made.

Both of us have experience traveling safely and properly storing food in bear country; Zinnia on the length of the AT and Colorado Trail, and Devan in the Wind River Range and Colorado Rockies. We plan to attend the bear safety class that CCOE offers for Ritt Kellogg Grant recipients, and will talk to the rangers at the Bettles NPS station to obtain more information on bears and attend one of their bear safety orientations if available.

Bugs are an inevitable nuisance in the Alaskan wilderness but pose little threat aside from the bother. We will bring bug shirts/nets, khaki colored clothing, bug-spray, and an antihistamine to counter their presence to the best of our ability.

Off-trail travel:

There are several risks associated with extended cross-country travel in the Brooks Range. Much of this area of the arctic is vegetated with tussocks, which create a very unstable surface for foot travel. Many falls and sprained ankles result from extended travel over tussocks. For this reason, we will travel by gravel bars or firm tundra whenever possible and safe. If we have to travel through tussocks, we will expect a slower pace as we ensure proper foot placement between, rather than on top of, the tussocks.

Both Zinnia and Devan have substantial experience with off-trail navigation, and our route from the Alatna River to the John River is relatively straightforward. The route follows one continuous river drainage for 25 miles, then drops straight into another drainage for the remaining 33 miles. That being said, referring often to our navigation resources will be important in ensuring we stay in the correct drainage, particularly higher up as the tributaries become more numerous. We will be carrying paper topo maps (USGS 7.5 minute series) as well as a Garmin InReach, and will refer to each of these every morning to review our route, and throughout the day to ensure we are on-track. We are incorporating some cross-country travel and navigation practice in our training plan (see "Training Plan").

Stream crossings:

During this trip, we will undoubtedly ford streams dozens of times, especially during our 8 days of backpacking. Most will likely be very low volume, shallow creeks, but we need to be prepared for crossing these streams during flooding, and fording the two major rivers, the Alatna and the John. There are several safety measures we will take to minimize the risk of injury or drowning. The first is crossing where the water is the slowest and shallowest. This often means crossing where the river is widest, and not when it appears still—this indicates depth. Other places to avoid fording include downstream of gravel bars or boulders, the outside edge of a curve, or where waves appear far apart—these all indicate deep spots in the river. Good places to cross include the shallow bit at the top of a channel between gravel bars, or a spot where small waves appear regular and close together. We will unbuckle and loosen our backpack straps as we ford to minimize risk of entrapment in our packs if we were to fall in, and scout for surface irregularities that indicate submerged obstacles. When necessary, we will cross together holding each other's side, or simply use trekking poles to navigate across. Zinnia and Devan both have substantial experience crossing low-volume creeks, but will continue to hone this skill in the swiftwater rescue course, and incorporate a higher volume ford (e.g. South Platte River below Deckers) into our independent swiftwater skills practice. If we are nervous about a particular crossing even after taking all the previously listed precautions, we can always put our PFD's on for the crossing, just in case we were to fall in.

Weather:

We have been repeatedly told by outfitters and rangers that mid-summer temperatures in the Brooks Range can range anywhere from 30-90 degrees, and that weather is highly volatile. We expect plenty of rain, high winds, and even the possibility of snow or sleet. In any of these conditions, hypothermia in an off-river context (hypothermia in a whitewater context will be discussed below) is a definite possibility. Our biggest measure will be prevention; we will encourage each other to not tolerate any prolonged coldness or shivering, stay properly hydrated; eat enough calories; put on waterproof layers before rain, and take measures early to get warm—even if this means temporarily delaying our progress. We will stop and treat for hypothermia as soon as any symptoms of mild hypothermia begin to appear. This includes getting to shelter, replacing damp clothing, wind and waterproof layering, warm liquids, calories, exercise, and a hypo wrap if necessary.

Another significant risk associated with rapid changes in weather is the delay of our food resupply. The pilots at Brooks Range Aviation have told us that planes are occasionally delayed due to poor weather, but rarely for more than 24 hours. In order to be prepared for a possible delay, we will carry an extra day of food. We will also be in communication with BRA about the timing of our resupply via our Garmin InReach, so any delay will not be coming as a surprise.

In other precautions surrounding weather, we will not ascend to high elevation during storms or when storms appear to be building. Our highest and most exposed point of the trip is the pass at 3350' on day 11. This is the only real point at which risk of exposure to lightning would be significantly higher; all other times traveling above treeline we will be contained within a river valley. The pass is located about 2.5 miles past our camp, so we will have no problem getting over it in the first few hours of the day to avoid exposure to afternoon weather. Although lightning strikes in river valleys too, the exposure will be considerably less than on passes, and we will be surrounded by other natural vegetation to disperse our chance of being struck by lightning. If a storm approaches while we are on the river, we will get off the water and seek a largely vegetated area with no particularly tall trees. If a considerable thunder storm hits while at camp, we will assume lightning position on our PFDs to minimize contact with the ground, or seek shelter in our tent to avoid excessive cold from rain.

WHITEWATER SAFETY

Rapids:

The upper Alatna river is characterized as splashy, shallow, continuous class II-II+ with one brief class III section at Ram Creek. However, several trip reports from the end of July and beginning of August mention that at mid-summer water levels, the Ram Creek rapids are nearly indistinguishable in difficulty from other class II on this section. These rapids are also easily scoutable and portagable on river left, and we have the exact coordinates of the first rapid so we can determine when we are approaching using the inReach. Because of these factors, we expect the most significant challenge of the Alatna to lie in the first 25 miles, with the steepest gradient and most continuous rapids on this river. This section is characterized in many trip reports as very braided, narrow channels with sharp curves and boulder gardens. We will travel close together as we navigate these rapids, communicating often about reading the water and determining the safest line. We will scout when necessary, especially to assess the risk of a strainer observed below or to determine the deepest channel when the river braids. We will take turns leading lines down rapids and the leader will always point positive to signal the other boater to navigate away from an obstacle. We will be ready to employ rescue skills to respond to a swim at any time. Throw bags will be kept in a readily accessible place in the cockpit of the packraft.

The John River will present significantly less of a whitewater challenge. The 50 miles of interspersed class II below Hunt Fork Lake is described as straightforward, with channels 30-40 ft. wide and an average of 2 ft. deep. The gradient is only significantly steep for the first 12 miles (36 ft./mi), then becomes very mellow. There is no rapid or section that is described as particularly difficult or technical. A few rapids on the John may be scouted, but for the most part the whitewater here is very manageable and easy read-and-run class II.

Both of us plan on taking the swiftwater rescue course offered through CC Outdoor Education in the Spring. Devan has taken this course once before and has much experience performing rescues in class II and III whitewater. We plan to review and practice swiftwater skills on our own after the course, such as throwing ropes, Z-drags, self-rescue in small rapids, in-boat swimmer rescue, etc. This practice will take place at Waterton Canyon and on the Arkansas River in April and May.

Strainers:

Strainers are a significant hazard on both the Alatna and John Rivers. We have heard from outfitters and online trip reports that strainers are an occasional occurrence in the upper 50 miles of the Alatna River. Mostly, they take the form of fallen and partly submerged trees. On the John River, since it is generally wider, strainers are less likely to occupy a significant amount of the width of the river, so they will likely be navigated around safely. We will be cautious and observant around river bends, particularly on the tight and winding upper Alatna, in order to spot strainer hazards as soon as possible. As mentioned above, if a strainer is observed ahead, we will immediately exit our boats and scout to determine whether the strainer can be safely navigated around. As a guideline, we will portage around the strainer in all situations in which the strainer occupies a quarter or more of the river width. If boats cannot be eddied out and exited safely in time before the strainer is reached, the boater in front will blow their whistle once to signify the presence of a hazard, and point positive away from the strainer, modeling aggressive paddling out the hazard area. In the unlikely event of one of us getting caught in a strainer, the other will exit their boat as soon as possible and throw a rope to the victim. If possible, the victim should use their momentum to grab hold of the strainer and hoist themselves up on top of it. If that doesn't work, and a throw rope isn't yet present, the victim should swim aggressively towards the main river and away from the strainer, parting branches if necessary.

Strainers can become particularly prevalent after a high water or flooding event. After significant rainfall, we will exercise increased precautions with respect to the risk of strainers (i.e. scouting, portaging, paddling slowly, observing around bends).

Foot Entrapment:

On shallow and boulder-strewn rivers like the Alatna and John, foot entrapment is a very present hazard. If either of us swims, we will assume swimmer's position with feet pointed downstream and not attempt to stand up in the river. Additionally, we will ensure there are no loose cord, straps, or other foot entrapment hazards present on our boats. If foot or other limb entrapment does occur, the other boater will throw a rope to the victim from shore, then attempt to disengage the entrapment from their boat if the throw rope is unsuccessful.

Rising water levels:

In every drainage in which we will be traveling, whether on foot or by packraft, water levels can rise rapidly after or during a rainstorm. It is not uncommon for the Alatna or John to rise up to 2-3 ft. For boating days, this means rapids can become somewhat more challenging, particularly on the first 25 miles of the Alatna where the river's gradient is steepest. Rescue response time in case of a swim will have to be especially fast, since higher water levels can quickly carry boats, gear, and swimmers far downriver. Increased scouting and/or portaging will be used in these unpredictable high water situations.

If the water rises high enough, we will wait to continue downriver. This would be the case if we observe significant debris being carried downstream, water level rises above 3 feet, or boating otherwise seems unsafe. On high water mornings we will closely monitor changes in the river to assess the safety of continuing downstream.

In camp scenarios, rising water level means the river can quickly flood the camp area. To prevent this, we will always camp at least 4 feet above the river whenever possible. Vegetated areas above the river banks will be preferred, and high sand bars will only be selected as camp if there are no other options.

Hypothermia:

Even in the summer season, the John and Alatna rivers have water temperatures well below 50 F, often in the 35-40 F range. Combined with sub-60 F air temperatures, the threat of hypothermia becomes significant. We will both be wearing drysuits, appropriately layered with warm synthetic tops and bottoms. We will also have pogies to keep our hands warm. We will be able to check the weather forecast on our InReach, so we'll be prepared to make most of our river miles earlier in the day if colder afternoon weather is expected, or vice versa. If one of us develops symptoms of mild hypothermia, we will get off the river and begin treatment. This would include removing dry suit and damp layers, replacing with dry, wind and waterproof layers, getting to shelter (likely a tent), exercise, caloric intake, warm liquids, and a hypo wrap if necessary.

Evacuation Plan

We will have a Garmin inReach rented from CCOE to contact outside help in case an evacuation is deemed necessary. We'll also be carrying an Iridium satellite phone from CCOE, as a secondary resource for contacts that cannot be reached by email or text. The NPS staff at Gates of the Arctic have recommended the Alaska Regional Communications Center (ARCC) as our first point of contact for coordinating an evacuation. This is a NPS facility based in the Denali area that coordinates emergency evacuations in national parks anywhere in the state of Alaska. They have the broadest range of resources and information at their disposal, and may send a plane from a local air charter service, the NPS, Fish and Wildlife, or a number of other options based on the urgency of the situation and who is most readily available. There is no Search and Rescue in this region of Alaska. The best and fastest way to contact the ARCC is by email, although we will have their phone number as well to send texts. The inReach SOS button is a great resource in the unlikely case that ARCC response is not immediate. We will also have contact info for our air charter Brooks Range Aviation (BRA), Gates of the Arctic ranger stations, alternate NPS emergency contacts, closest hospitals, and a few family members loaded onto the inReach. In the event that we are having difficulty determining the medical necessity of an evacuation, medically experienced family members may be consulted via inReach and asked to perform further research on signs and symptoms. We will remain together at all times, giving no reason that one of us should end up without access to the inReach at any time. The satellite devices will stay charged and protected from damage and the elements.

Brooks Range Aviation has not yet had the chance to discuss with us all the specific locations that bush and float planes can land along our route, but they are getting back to us shortly about this question. We will mark all of these potential evacuation locations on our maps and load the coordinates onto the inReach, and will take into account their proximity when considering evacuation options. For now, we are aware that Gaedeke Lake, Circle Lake, Takahula Lake, Hunt Fork Lake, Malamute Airstrip, and Sixtymile Airstrip are all options for landing, and they are marked and described on our CalTopo route map. In our itinerary, we note the closest site to each camp that a plane can land. In the event that a helicopter evacuation is needed, we will coordinate with ARCC and cannot know the evacuation location at this stage of planning.

Our evacuation procedures will differ based on the urgency of the situation. If a rapid evacuation is needed, the ARCC will be our first contact. In this scenario, the patient is likely to be evacuated by helicopter, given the diffuse distribution of sites at which bush or float planes can land. We will stay put until we have determined a pick-up location with ARCC staff, and communicate with family or NPS contacts if medical advice is needed. If a non-rapid evacuation is needed, we will contact ARCC first and will take into account our proximity to bush/float plane landing sites in devising a plan with their staff. Since these evacuations have a 24-48 hour window, we will consider traveling towards one of these sites if possible, realistic, and safe. This would minimize the cost to the NPS (necessary evacuations are provided free of charge to visitors), reserving more funds for life-threatening situations. For a third evacuation scenario, in which one of us sustains an injury unusable in one, but not the other, form of recreation we are engaging in, we will likely evacuate via float/bush plane and coordinate directly with BRA. This would mean being picked up at one of the airstrips or lakes they can land on, at our own expense. These scenarios are discussed in further detail below.

In the event of a strain, sprain, or other injury that prohibits extended on-foot travel but does not need immediate medical attention, we may consider evacuation by accelerated river travel. In the case of such an injury, if we are still on or within

feasible walking distance of the Alatna River, we will simply travel downriver to Malamute Airstrip, located 57.5 miles from our last camp on the Alatna. This stretch of river is class I, posing no difficulty in the event of an evacuation. Depending on our pace and the severity/location of the injury, this easy class I float could take 3-6 days to complete. We will have plenty of food to do this, since we are starting with 15 day's food at Gaedeke Lake. From Malamute Airstrip, we can arrange for a relatively cheap air taxi back to Bettles with BRA, with whom we will be in contact about our arrival time via inReach.

For a similar evacuation on the John River, we can proceed to Sixtymile Airstrip (38.5 miles from Hunt Fork Lake, along our planned route) where bush planes can land easily and comparatively cheaply. Alternatively, if we have passed Sixtymile Airstrip, we can simply float to the Koyukuk confluence and arrange for an air taxi for the remaining 4 miles back to Bettles. There are also very likely other gravel strips between Sixtymile and the Koyukuk River, which we plan to discuss with BRA.

In the case of a minor injury during the backpacking segment that is only unusable for paddling and not walking, we will likely exit the backcountry at Hunt Fork Lake with our scheduled food drop. This will incur at no additional cost, since we are already paying for this service.

Special Preparedness

Although neither of us has any preexisting health conditions that would raise concerns, we will be actively checking in with one another in the field to ensure that we are mentally and physically well. If something unexpected arises we will seek help and evacuate if necessary.

Emergency Resources

Alaska Regional Communications Center
(907) 683-9555 (call & text)
arcc@nps.gov (preferred)

Alternate NPS emergency assistance contacts (call only):
833-477-9357
907-683-2276

Gates of the Arctic National Park Service (Main office):
833-477-9357

Bettles Ranger Station
[\(907\) 692-5494](tel:(907)692-5494)

Anuktuvuk Pass Ranger Station
907-661-3520

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

Brooks Range Aviation:
[\(800\) 692-5443](tel:(800)692-5443)

Coyote Air
[\(907\) 678-5995](tel:(907)678-5995)

Wright Air Service:
3842 University Ave South
Fairbanks, AK, 99709
(907) 474 0502

LifeMed Alaska (24/7 Emergency medical air evacuation from backcountry)
[\(907\) 563-6633](tel:(907)563-6633)

Bettles Lodge
1 Airline Dr, Bettles, AK 99726
[\(907\) 692-5111](tel:(907)692-5111)

Emergency Communication

We will be carrying a Garmin inReach device, as well as a satellite phone, both rented from CCOE. We have confirmed that these devices work well within Gates of the Arctic at its high latitude. We will also be carrying small mirrors, as recommended by the NPS website as a way to communicate with air charter pilots in the unlikely event that other emergency communication methods fail.

COVID-19 Preparedness

What is the current COVID-19 situation in the area where you are intending to travel?

There are no travel restrictions to Alaska at this time, though you cannot travel to Alaska if you are positive with Covid-19. We will make sure to test negative before boarding our flight. Once we test negative we are safe to travel through the airports (SFO, Seattle, Fairbanks) and will not venture outside of these airports. Once in Bettles, there are no active restrictions, but we will of course continue to take all relevant precautions and care to eliminate any risk of transmission/exposure. Once we are in Gates of the Arctic National Park the risks are resolved almost completely. There are no active restrictions in Gates of the Arctic aside from a mask mandate in all National Park buildings. There is no visitation access to Anaktuvuk Pass, though we had no intention of visiting and remain unaffected by this restriction. We will continue to stay informed and check the statistics of Fairbanks and Bettles' infection rates and Fairbanks' ICU capacity as our trip nears. Thus far, it's all we can do to remain educated and follow any guidelines released.

How do you intend to mitigate the risks of exposing yourself and your teammates to COVID-19 while traveling to your trailhead?

We will be sure to test before we begin traveling to make sure that we are in the clear. Aside from vaccinations, we will engage in basic hygiene by washing our hands frequently, remaining masked for the duration of our travel with N95/KN95 type masks, staying distanced as best we can in the airport, and taking care of food shopping before travel to minimize public spaces that we interact with. There are inevitable risks of Covid-19 transmission while traveling, but with these precautions and attentiveness, we are confident we can safely and responsibly execute this trip.

How do you intend to mitigate the risks of exposing the residents of the area(s) where you will be traveling to COVID-19?

Similarly to what was stated above, in mitigating risks of exposure to ourselves, we will in turn be mitigating any risk of exposing residents to Covid-19. The only residential area that we will spend any time in aside from airports is in Bettles, Alaska. We will spend a night on either end of our trip in Bettles, though our interactions will be sparse even still. We will visit the Bettles Ranger Station for a mandatory orientation, and will be in a plane with our pilot in order to get dropped at our starting point. All of these interactions will be masked. Aside from this, we will not be grocery shopping, or interacting with locals for any predicted reasons. It will be easy to keep to ourselves, remain masked in public and shared spaces, and continue to practice good hygiene. With the information that we have about the virus spreading, if we are diligent and thorough, we can avoid impacting the local area and residents.

How do you intend to mitigate the risks of COVID-19 while in the field?

Because we are traveling in an extremely remote backcountry location, risks of exposure in the field are very minimal. It is unlikely that we will see more than a few groups, and because our expedition is outside in open wilderness, if we cross paths it will be very simple to keep a safe distance of 6 feet and prevent transmission on either end. We will travel with medical-grade masks and hand sanitizer in case we need to administer medical care to a person outside our party. We will function as a family unit for the entirety of this expedition and will do everything we can to keep ourselves and each other safe.

If someone on your expedition develops COVID-19 symptoms, how will you handle it?

If either of us develops Covid-19 symptoms during the expedition, it is important that we respond with care. If symptoms remain mild and manageable (such as headache, sore throat, slight cough) we will administer treatment, and continue on the expedition and monitor symptoms. If the symptoms develop and cause trouble breathing, extreme fatigue, or unmanageable headache and cough, we will request an evacuation. It will be necessary to inform our pilots that we are Covid-positive and take extra precautions against transmission during transportation.

Budget

Budget

[Budget.pdf](#) (50KB)

Uploaded 1/26/2022 4:05am by Devan Udall

Transportation

4937

Food and Fuel

684.53

Maps and Books

0

Permits/Fees

0

Gear Rentals

0

Carbon Emissions Offsetting

47.54

Total Funding Request

5000

Funding Per Person

2500

Cost Minimization Measures

Our trip expenses are mainly comprised of flight costs which we have spent a generous amount of time researching. We found the cheapest day to fly to Fairbanks, and chose the least expensive flight on that day. Wright Air is the only air charter from Fairbanks to Bettles, and there are no roads that reach Bettles. While it would be possible to get to the Alatna River from air charter services in Coldfoot, which is connected by road to Fairbanks, this option actually turns out to be more expensive when chartered flights are factored in. We have contacted every air charter that flies float or bush planes into the Brooks Range, and found that Brooks Range Aviation provides the best rates to our desired destination of any company.

Our food drop is the next big expense, which is also being coordinated with Brooks Range Aviation. We discussed with BRA cheaper options for the resupply at other lakes nearby, but ultimately determined that it was unrealistic to travel the extra distance to these locations. We planned our second leg on the John River which flows into the Koyukuk River near Bettles. Taking out near town will save us the cost of another float plane and grant the ease of returning. We will still need to take another flight with Wright Air back to Fairbanks which is unavoidable, and have again found the cheapest flights to return home on red eye flights. Ultimately, flying makes a lot more sense than driving considering the logistics, safety hazards, and cost of driving for over 48 total hours to reach Fairbanks.

Food is our next considerable cost, which we have calculated at \$10.50 per person per day. This cost is a reasonable bar for us to get the calories and nutrition that we need, as food is an inevitable factor for a demanding backcountry expedition. We have chosen to buy food within the lower 48 because food in Fairbanks would cost more than what it will cost to transport. Although the cost of shipping our food to Bettles from Colorado is substantial, it actually turns out to be slightly cheaper than flying with our food, since Wright Air will charge \$1.80 for each pound in excess of the 80 lbs. allotment for the two of us.

Expedition Agreement**Expedition Agreement**[RKMF_Expedition_Group_Agr....pdf](#) (335KB)

Uploaded 1/26/2022 4:17am by Devan Udall

Gates of the Arctic Itinerary

Refer to our map (<https://caltopo.com/m/QHU2B>) for a geographical representation of our itinerary. Purple lines indicate foot travel, and orange lines indicate river travel. The camp # on our map corresponds to the day # on the itinerary (i.e. the line preceding Camp 2 on our map is Day 2 on our itinerary). All significant topographical features discussed in the itinerary are marked and described there.

Day 0 - 7/18 (Travel day)

Leg 1 – ██████████ Fairbanks, AK Zinnia and Devan depart from ██████ 6:00am, land in FAI at 11:41am (Alaska Airlines flight #1271/1140)

Leg 2 – Fairbanks - Bettles, AK Depart from Fairbanks 1:15pm, arrive in Bettles 2:15pm (Wright Air, daily flights). Brooks Range Aviation will provide accommodation for this night.

Day 1 - Portage to Alatna River

Leg 3 – Bettles - Gaedeke Lake Depart from Bettles 9am in Beaver float plane, arrive at Gaedeke Lake ~10am (operated by Brooks Range Aviation)

Start: Gaedeke Lake (67.89722, -155.08249)

End: Weyahok confluence at Alatna headwaters (67.83719, -155.13639)

Mileage: 4.26 miles

Est. travel time (from CalTopo): 4.2 hours

Elevation: 2789' - 2486' ; +96'/-398'

Route: Follow the stream proceeding from the south end of Gaedeke Lake. The river is generally too shallow to float here, so we will portage on foot. Camp at the confluence of the two streams that now form the upper Alatna River.

Water: Alatna River; Weyahok Creek

Hazards: Stream crossings through swift shallow water; traveling on uneven surfaces; very heavy packs

Evacuation: Gaedeke Lake is the closest location for evacuation by plane.

Notes: As we will be portaging with boats, gear, and 13 days of food, our packs will be exceptionally heavy. We are allowing an entire day for traveling these 4 miles to anticipate the difficulty of this portage. This section will also be heavily shrub-covered, based on CalTopo's terrain data. To mitigate these challenges, it is possible that the packrafts could be loaded with some gear and lined down the stream if there is enough water; several trip reports mention doing this in the month of July.

Day 2 - Packrafting

Start: Confluence at Alatna headwaters (67.83719, -155.13639)

End: Sand bar river right (67.70290, -154.81852)

Mileage: 14.69 miles

Est. travel time: 7 hours

Elevation: 2484' - 1660' ; -848'

Route/rapids: First day of paddling on the Alatna. This section of river is described as fairly continuous, winding class II. The gradient of the river is steepest on this upper section (nearly 50 ft./mi), and this is the most challenging whitewater the Alatna will offer until the Ram Creek rapids on Day 3.

Water: Alatna River

Hazards: Cold water; shallow rapids; occasional strainers; continuous whitewater with potentially few eddies

Evacuation: From Day 1 camp, walking back up to Gaedeke Lake is a possibility. Otherwise, Circle Lake (approx. 32 miles from camp) is the next evacuation spot accessible by plane. It is easily approachable from the east or west by foot. Portage from the river takes 45 minutes - 2 hours.

Notes: Before we begin our first day of boating, we will review river safety protocols (whistle signals, pointing positive, response to encountering strainers, plans for significant rapids, rescue and self-rescue technique). The river is braided in sections, so careful observation or scouting may be used to determine the deepest channel. Nearly all trip reports from July or August mention having to drag or line boats for many short sections where the river becomes too shallow. River travel on this day is expected to be slow for this reason.

Day 3 - Packrafting

Start: Sand bar river right (67.70290, -154.81852)

End: Land outcropping river right; 2.5 miles below Ram Creek (67.65110, -154.44468)

Mileage: 12.52 miles

Est. travel time: 5 hours

Elevation: 1660' - 1171' ; -572'

Route/rapids: Rapids are comparable to Day 2. Fairly continuous class II, gradient is somewhat milder in this section. One short section (about ½ mile) of class III is encountered just above Ram Creek, after 9.5 miles of paddling.

Water: Alatna River

Hazards: Cold water; shallow rapids; occasional strainers; continuous whitewater with potentially few eddies

Evacuation: Circle Lake (approx. 19 miles from camp) is the next evacuation spot accessible by plane. It is easily approachable from the east or west by foot. Portage from the river takes 45 minutes - 2 hours.

Notes: The river maintains its braided character, so careful observation or scouting may still be used to determine the deepest channel. Here dragging or lining boats for short shallow sections is still a possibility. The Ram Creek rapids are a series of 3 short class III rapids that are scoutable, as well as easily portaged, on the river left side. The first rapid is at 67.68089, -154.50983, and the other two occur within the following ½ mile.

Day 4 - Packrafting

Start: Land outcropping river right; 2.5 miles below Ram Creek (67.65110, -154.44468)

End: River right bank at Awlinyayak Creek (67.55154, -154.15119)

Mileage: 13.2mi

Est. travel time: 4.4 hours

Elevation: 1171' - 902' ; -341'

Route/rapids: The river maintains its class II character, but the gradient continues to become milder, now at 20 feet per mile. This section is described as containing continuous class II+ rapids, with no significant hazards.

Water: Alatna River; camp located adjacent to river

Hazards: Cold water; shallow rapids; occasional strainers; continuous whitewater with potentially few eddies

Evacuation: Circle Lake (approx. 8 miles from camp) is the next evacuation spot accessible by plane. It is easily approachable from the east or west by foot. Portage from the river takes 45 minutes - 2 hours.

Notes: The river becomes significantly less braided in this section, but some attention to various channels may still be required at points. In this section, the river also becomes significantly deeper as more tributaries add to its flow.

Day 5 - Packrafting + Backpacking

Start: River right bank at Awlinskyak Creek (67.55154, -154.15119)

End: Arrigetch Creek valley (67.45324, -154.05411)

Mileage: 8.95 mi boating/ 5.17 mi walking

Est. travel time: 3 hours boating/ 5 hours walking

Elevation: 902' - 839' ; -63' (boating)
837' - 1982' ; +1313' -175' (walking)

Route/rapids: 3-4 miles of interspersed class II rapids, then class I float until Arrigetch Creek. The river's gradient mellows to 6 feet per mile. From camp at Awlinskyak, Arrigetch Creek is the next major tributary on river right. There is a social trail up the Arrigetch valley found on looker's left of the creek.

Water: Alatna River; Arrigetch Creek

Hazards: Cold water; shallow rapids; occasional strainers; boulder fields

Evacuation: Circle Lake (approx. 8 miles from camp) is the closest major location for air evacuation. It is easily approachable from the east or west by foot. Portage from the river takes 45 minutes - 2 hours.

Notes: The river is now mostly dominated by a single channel. After a bit of class II after camp, the rest of the day will be a mellow class I float with gorgeous scenery. Upon reaching Arrigetch Creek, we will set up a proper bear hang for our deflated boats and any gear or food that we will not need for our 2-night trek into the Arrigetch valley. We will pin the GPS coordinates of the hang with our inReach to easily locate it upon return.

Day 6 - Arrigetch exploration

Start: Arrigetch Creek valley (67.45324, -154.05411)

End: Same as above

Mileage: 7.29mi

Est. travel time: 6.5 hours

Elevation: 1982' - 2957' ; +1170' -1167'

Route: Follow Arrigetch Creek up the valley. A social trail should exist for much of the way, although it may be hard to follow.

Water: Arrigetch Creek

Hazards: Stream crossings in swift current; boulder fields; falling rock

Evacuation: Circle Lake (approx. 8 miles from camp) is the closest evacuation spot accessible by plane. It is easily approachable from the east or west by foot. Portage from the river takes 45 minutes - 2 hours.

Notes: This day is allotted to explore the Arrigetch peaks area from our base camp.

Day 7 - Backpacking and Packrafting

Start: Arrigetch Creek valley (67.45324, -154.05411)

End: River left bank at Pingaluk River (67.47297, -153.79118)

Mileage: 5.17mi walking/ 6.07mi boating

Est. travel time (CalTopo): 4 hours walking/ 2 hours boating

Elevation: 1995' - 837' ; +70' -1228'

Route/rapids: Proceed down the Arrigetch valley via social trail. From Arrigetch Creek, our camp is just upstream of the next major tributary on river left, Pingaluk River. Class I float to camp.

Water: Arrigetch Creek; Alatna River

Hazards: Stream crossings in swift current; cold water

Evacuation: Circle Lake (approx. 2.5 miles from camp) is the closest evacuation spot accessible by plane. It is easily approachable from the east or west by foot. Portage from the river takes 45 minutes - 2 hours.

Notes: Use GPS coordinates to retrieve gear and food. Here we'll inflate and load our boats again to travel the 6 miles to camp, a scenic class I float. Circle Lake is approximately halfway between Arrigetch Creek and camp on river right.

Day 8 - Backpacking

Start: River left bank at Pingaluk River (67.47297, -153.79118)

End: Flat vegetated area on river right (67.54053, -153.65677)

Mileage: 7.43mi

Est. travel time (CalTopo): 6.8 hours

Elevation: 820' - 1189' ; +481' -112'

Route: Follow the Pingaluk drainage northeast.

Water: Pingaluk river—trip reports confirm plenty of water in this drainage mid-summer

Hazards: Stream crossings in swift current; traveling on uneven surfaces (i.e. gravel bars, tussocks)

Evacuation: Circle Lake (approx. 9.5 miles from camp) is the closest evacuation spot accessible by plane. It is easily approachable from the east or west by foot. Portage from the river takes 45 minutes - 2 hours.

Notes: On this morning, we will load our packs and review our route to Hunt Fork Lake. We are expecting heavy shrub cover on this first day low down in the river valley, so we will try to travel on the gravel bars adjacent to the river whenever possible. We will try to minimize fords but expect there to be many.

Day 9 - Backpacking

Start: Flat vegetated area on river right (67.54053, -153.65677)

End: Flat vegetated area river left (67.61600, -153.53438)

Mileage: 6.86mi

Est. travel time (CalTopo): 6.7 hours

Elevation: 1150' - 1576' ; +551' -216'

Route: Continue along the Pingaluk drainage.

Water: Pingaluk river

Hazards: Stream crossings in swift current; traveling on uneven surfaces (i.e. gravel bars)

Evacuation: Circle Lake (approx. 16 miles from camp) is the closest evacuation spot accessible by plane. It is easily approachable from the east or west by foot. Portage from the river takes 45 minutes - 2 hours.

Notes: The river becomes more channelized for much of this day, so we will continue to travel by sand/gravel bar when possible, but likely take the sides of the river valley for most of the day. We expect travel through this mostly vegetated section of the valley to be slow.

Day 10 - Backpacking

Start: Flat vegetated area river left (67.61600, -153.53438)

End: Flat vegetated area river right (67.70082, -153.43665)

Mileage: 7.46mi

Est. travel time (CalTopo): 7.7 hours

Elevation: 1534' - 2303' ; +936' -167'

Route: Continue along Pingaluk drainage

Water: Pingaluk river

Hazards: Stream crossings in swift current; traveling on uneven surfaces (i.e. gravel bars)

Evacuation: Circle Lake (approx. 23.5 miles from camp) is the closest evacuation spot accessible by plane. It is easily approachable from the east or west by foot. Portage from the river takes 45 minutes - 2 hours.

Notes: The majority of the river valley is still shrub-covered, but with slightly more barren ground. Travel will still be slow navigating the brush. Several places in this part of the drainage have open gravel bars for more efficient travel.

Day 11 - Backpacking

Start: Flat vegetated area river right (67.70082, -153.43665)

End: Flat sand area river right (67.72842, -153.24450)

Mileage: 6.33mi

Est. travel time (CalTopo): 8.3 hours

Elevation: 2305' - 2442' ; +1128' -984'

Route: Continue along Pingaluk drainage. After 1.25 miles the two tributaries fork, and we will follow the left one up to the pass, contouring around the knob on the right. We will peak at 3350' at the pass 2.75 miles after camp. On the other side of the pass we will encounter another fork of two merging micro-tributaries, and follow this creek drainage down for the remainder of the day.

Water: Water at the previous night's camp should be plentiful, but as we ascend towards the pass water availability could become scarce. We will make sure to fill up before leaving camp.

By tonight's camp, more than a dozen micro-tributaries draining from the peaks have joined Hunt Fork River, ensuring that there should be sufficient water availability.

Hazards: Rapid ascent in elevation; travel at high elevation; exposure to weather and wind

Evacuation: Hunt Fork Lake (approx. 29mi from camp) is the best nearby location for evacuation by plane.

Notes: A large portion of today's route remains shrub-covered; we still expect travel to be slow here. Additionally, the gradient of the drainage from camp to the pass becomes significantly steeper than previous days. This will be a long and strenuous day, despite the short mileage. We will travel over the pass in the morning to ensure we are not exposed to any afternoon weather at high elevation.

Day 12 - Backpacking

Start: Flat sand area river right (67.72842, -153.24450)

End: Large sand bar river left (67.75649, -152.97393)

Mileage: 8.33mi

Est. travel time (CalTopo): 8.2 hours

Elevation: 2442' - 1998' ; +288' -735'

Route: Follow Hunt Fork River drainage east towards the John River.

Water: Hunt Fork River

Hazards: Extended downhill travel; stream crossings in swift current; traveling on uneven surfaces

Evacuation: Hunt Fork Lake (approx. 20.5mi from camp) is the closest location for evacuation by plane.

Notes: Based on CalTopo data, we expect about $\frac{2}{3}$ of this section to be shrub-covered. Travel by sand bars may be appropriate where river is wide enough.

Day 13 - Backpacking

Start: Large sand bar river left (67.75649, -152.97393)

End: Sand bar river right (67.82137, -152.79678)

Mileage: 6.86mi

Est. travel time (CalTopo): 6.8 hours

Elevation: 1998' - 1698' ; +260' -560'

Route: Continue along Hunt Fork River drainage

Water: Hunt Fork River

Hazards: Extended downhill travel; stream crossings in swift current; traveling on uneven surfaces

Evacuation: Hunt Fork Lake (approx. 13.5mi from camp) is the closest location for evacuation by plane.

Notes: Similar shrub/tussock cover as previous day.

Day 14 - Backpacking

Start: Sand bar river right (67.82137, -152.79678)

End: Sand bar river left (67.85127, -152.61289)

Mileage: 5.87mi

Est. travel time (CalTopo): 7.3 hours

Elevation: 2050' - 1291' ; +629' -1046'

Route: Follow the drainage for 2 miles, until the river enters a small canyon. “Cut the corner” of the canyon curve through the next low point in the side of the valley, gradually descend to meet back up with the river.

Water: Hunt Fork River

Hazards: Extended downhill travel; stream crossings in swift current; traveling on uneven surfaces

Evacuation: Hunt Fork Lake (approx. 8mi from camp) is the closest location for evacuation by plane.

Notes: From camp, the river slowly begins to canyon out. After 2 miles it becomes fully inaccessible, until we meet up with it again about 3 miles later. This will be our most significant day of elevation loss. Shrub cover is still about 2/3.

Day 15 - Backpacking

Start: Sand bar river left (67.85127, -152.61289)

End: Hunt Fork Lake (67.78816, -152.39565)

Mileage: 8.21mi

Est. travel time (CalTopo): 7 hours

Elevation: 1293' - 1108' ; +44' -227'

Route: Follow Hunt Fork River to the confluence with the John River at Hunt Fork Lake

Water: Hunt Fork River; Hunt Fork Lake

Hazards: Stream crossings in swift current; traveling on uneven surfaces

Evacuation: Hunt Fork Lake—approx. 200 yard portage from river.

Notes: River valley widens and tussocks become more intense on the valley floors; travel by sand bars will likely be preferred for most of this day. Elevation loss is mild—largely a flat travel day.

Day 16 - Resupply and Packrafting

Start: Hunt Fork Lake (67.78816, -152.39565)

End: River left (67.64132, -152.27938)

Mileage: 12.75mi

Est. travel time: 4.25 hours

Elevation: 1099' - 945' ; -260'

Route/rapids: Portage 100 yards from lake to river. Rapids are straightforward class II.

Water: Hunt Fork Lake; John River

Hazards: Cold and shallow water; occasional strainers

Evacuation: Hunt Fork Lake; possible to fly out with our scheduled food drop.

Notes: Receiving our resupply for the next 8 days on this morning. BRA will land a beaver plane on Hunt Fork Lake. We will then have to portage with gear and food in packs to the river, approximately 200 yards. While transitioning to and loading our packrafts, we will review river safety protocols. Gradient of this section of the John is 36 feet/mile. River is plenty wide, but braids somewhat frequently. Strainers may be present but infrequent and easily avoidable.

Day 17 - Packrafting

Start: River left (67.64132, -152.27938)

End: Sand bar river right (67.51823, -152.16355)

Mileage: 12.75mi

Est. travel time: 4.25 hours

Elevation: 945' - 863' ; -151'

Route/rapids: Class II rapids continue, interspersed with flatwater.

Water: John River

Hazards: Cold and shallow water; occasional strainers

Evacuation: Sixtymile Airstrip (67.38821, -152.04705) will be the easiest nearby location for a non-rapid evacuation by plane.

Notes: Gradient 8 feet/mile. River continues to braid, strainers may be present but infrequent and easily avoidable. Good day hiking up Wolverine Creek.

Day 18 - Packrafting

Start: Sand bar river right (67.51823, -152.16355)

End: Sand bar river left, adjacent to lakes (67.39446, -152.05971)

Mileage: 13.03mi

Est. travel time: 4.3 hours

Elevation: 864' - 807' ; -88'

Route/rapids: Class II rapids continue, interspersed with flatwater.

Water: John River

Hazards: Cold and shallow water; occasional strainers

Evacuation: Sixtymile Airstrip (67.38821, -152.04705) is adjacent to camp and will be the easiest nearby location for a non-rapid evacuation by plane.

Notes: Gradient 8 feet/mile. River continues to braid, strainers may be present but infrequent and easily avoidable. From camp, Allen River and Crevice Creek provide great side-hikes.

Day 19 - Packrafting

Start: Sand bar river left, adjacent to lakes (67.39446, -152.05971)

End: Sand bar river left (67.24704, -151.98310)

Mileage: 13.87mi

Est. travel time: 4.6 hours

Elevation: 807' - 751' ; -78'

Route/rapids: Some mild class II rapids, ending in a class I float.

Water: John River

Hazards: Cold and shallow water; occasional strainers

Evacuation: Closest downriver plane evacuation site at Koyukuk confluence.

Notes: Gradient 3.5 feet/mile for remainder of trip. Possible cool exploration up Grizzly Creek or Missouri Creek.

Day 20 - Packrafting

Start: Sand bar river left (67.24704, -151.98310)

End: River left at bend (67.16244, -151.84912)

Mileage: 13.85mi
Est. travel time: 4.6 hours
Elevation: 751' - 728' ; -86'
Route/rapids: Flatwater
Water: John River
Hazards: Cold and shallow water; increased sun exposure
Evacuation: Closest downriver plane evacuation site at Koyukuk confluence.
Notes: None

Day 21 - Packrafting

Start: River left at bend (67.16244, -151.84912)
End: Center large sand bar (67.04872, -151.81758)
Mileage: 14.74mi
Est. travel time: 5 hours
Elevation: 728' - 679' ; -78'
Route/rapids: Flatwater
Water: John River
Hazards: Cold and shallow water; increased sun exposure
Evacuation: Closest downriver plane evacuation site at Koyukuk confluence.
Notes: None

Day 22 - Packrafting

Start: Center large sand bar (67.04872, -151.81758)
End: Small sand bar river right (66.97281, -151.63088)
Mileage: 15.84mi
Est. travel time: 5.3 hours
Elevation: 679' - 623' ; -136'
Route/rapids: Flatwater
Water: John River
Hazards: Cold and shallow water; increased sun exposure
Evacuation: Closest downriver plane evacuation site at Koyukuk confluence.
Notes: None

Day 23 - Packrafting + Backpacking

Start: Small sand bar river right (66.97281, -151.63088)
End: Town of Bettles—Bettles Lodge (66.92131, -151.50902)
Mileage: 7.62mi boating; 4.2mi walking
Est. travel time: 6.5 hours
Elevation: 623' - 587' ; -54' (boating)
597' to 647' +120' -73' (walking)
Route/rapids: Flatwater to the Koyukuk confluence. Ferry across to the other side of the Koyukuk River, and walk east towards Bettles.
Water: John River
Hazards: Cold and shallow water; increased sun exposure

Evacuation: Closest downriver plane evacuation site at Koyukuk confluence.

Notes: May require navigational tools to direct ourselves towards Bettles. Foot travel may be slow; vegetation cover is heavy in the Koyukuk valley. We'll spend this night in our cozy accommodation at Bettles Lodge.

Day 24 - 8/11 (Travel day)

Leg 1 – Bettles - Fairbanks, AK Depart from Bettles 11am, land at FAI 11:45am (Wright Air, daily flights)

Leg 2 – Fairbanks - home

- 1) Devan departs from FAI 1:00am (8/12), lands at [REDACTED] at 8:35am (Alaska Airlines flight [REDACTED])
- 2) Zinnia departs from FAI 1:00am (8/12), lands in [REDACTED] at 1:15pm (Alaska Airlines flight [REDACTED])

Gates of the Arctic: Food List

LEG 1: Days 1-15

BREAKFAST	CALORIES	QUANTITY	TOTAL WEIGHT	PRICE
Granola (3)	300 cal/ ½ cup	3 bags	1.5lb	(\$.72 x 24oz) \$17.28 +5.76
Oatmeal (9 day)	339 cal/cup	9 cups	1.8 lbs	(\$1 x 1.8) \$1.80 +.2
Powdered Eggs (3)	252/ 4 egg	24 eggs	9 oz	(\$10 x 2) \$20
PB	200 cal/ 2 tbs	1 jar	1lbs	\$5
Powdered milk	350 cal/ ½ cup	2 cup	.5 lbs	\$10.75 (can't find bulk)
Dried Fruit	332 cal/ 1 cup	3 cup	1.9 lbs	\$11.53
Coconut Flakes	85 cal/ oz	8 oz	8 oz	\$2.40
LUNCH	CALORIES	QUANTITY	TOTAL WEIGHT	PRICE
Sausage (3oz meat for dev)	300-400 cal	5 sausages	(12oz x 5) 3.75 lbs	(\$4.73 x 4) \$18.92
Tuna Packet	150 cal	10 tuna packets	(2.6 oz x 10) 1.625 lbs	(\$1.24 x 10) \$12.4
Cheese	115 cal/ oz	35 oz	2.2 lbs	\$9.98
Flour Tortilla	300 cal	50 tortillas	7.5 lbs	(\$2.48 x 5) \$12.4
Hot Sauce (travel bottle)	~5	One bottle	2.2 oz	\$2.50
Mayo and Mustard (deli)	~100 calories	Packets from deli	2 oz	~
Dehydrated Hummus	45 calories/ tbs	3 cups	14.4 oz	\$28.5
Pepperoni	140 cal/ 14 slice	2 packages	10 oz	(4.49 x 2) 8.98

Chips (jalapeno)	300 cal/ 30 chips	2 bags	1 lbs	(\$3.69 x 2) \$7.38
SNACKS	CALORIES	QUANTITY	TOTAL WEIGHT	PRICE
Trail Mix	700 cal/cup	4 cups	2.2 lbs	\$11.99
Bars	200-300 cal	30 bars	2.9 lbs	(\$9.94 x 3) \$29.82
Jerky	160 cal/ 2 oz.	2 large bags	~2 lbs	(\$10.98 x 2) \$21.96
Apples	95 cal	2 apples	10 oz	\$3
DINNER	CALORIES	QUANTITY	TOTAL WEIGHT	PRICE
Rice (4x)	675 cal/cup (uncooked)	4 cups	1.6 lbs	\$3.22
Black Beans (4x)	662 cal/cup (uncooked)	2 cups	1 lbs	\$1.28
Mac n Cheese (annies)	~220 cal/ box	12 boxes	4.08 lbs	(\$2.58 x 12) \$30.96
Cous Cous (4x)	600 cal/ cup (dry)	2.5 cups	1.75 lbs	\$8.9
Chickpeas (4x)	750 cal/cup	2 cups	12 oz	\$1.59
Dehydrated Pesto	100 cal/ ¼ cup	4 packs	1 oz	(\$1.76 x 4) \$7.04
Bullion Cubes	16 cal/ cube	One container	~	&1.95
Dehydrated Veggies	280 cal/ cup	4 cups	8 oz	\$9.77
Spam	174 cal/ packet	4 packets	2.5 oz(x4) 10 oz	(\$1.28 x 4) \$5.12
Salmon	70 cal/ package	6 packets	2.5 oz(x6) 15 oz	(\$2.36 x 6) \$14.16
Olive Oil	250 cal/ oz	26 oz	26 oz	\$6.72

TOTAL:			46.27 lbs	\$327.30
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LEG 2: Days 16-23 (8)

BREAKFAST	CALORIES	QUANTITY	TOTAL WEIGHT	PRICE
Granola (2)	300 cal/ ½ cup	1 bags	.5 lb	(\$.72 x 8oz) \$5.76
Oatmeal (8 day)	339 cal/cup	8 cups	1.6 lbs	(\$1 x 1.6) \$1.60
Powdered Eggs (3)	252/ 4 egg	12 eggs	4.5 oz	(\$10 x 1) \$10
PB	200 cal/ 2 tbs	1 jar	1lbs	\$5 (?)
Powdered milk	350 cal/ ½ cup	2 cup	.5 lbs	- (use bag from leg 1)
Dried Fruit	332 cal/ 1 cup	2 cup	1.33 lbs	\$7
Coconut Flakes	85 cal/ oz	8 oz	8 oz	\$2.40
LUNCH	CALORIES	QUANTITY	TOTAL WEIGHT	PRICE
Sausage (3oz meat for dev)	300-400 cal	3 sausages	(12oz x 3) 2.25 lbs	(\$4.73 x 3) \$4.19
Tuna Packet	150 cal	6 tuna packets	(2.6 oz x 6) 15.6 oz	(\$1.24 x 6) \$7.44
Cheese	115 cal/ oz	20 oz	20 oz	\$8.69
Flour Tortilla	300 cal	30 tortillas	4.5 lbs	(\$2.48 x 3) \$7.44
Hot Sauce (travel bottle)	~5	One bottle	2.2 oz	\$2.50
Mayo and Mustard (deli)	~100 calories	Packets from deli	2 oz	~
Dehydrated Hummus	45 calories/ tbs	3 cups	14.4 oz	Bag from Leg !

Pepperoni	140 cal/ 14 slice	1 packages	5 oz	(4.49 x 1) \$4.49
Chips (jalapeno)	300 cal/ 30 chips	1 bags	8 oz	\$3.69
SNACKS	CALORIES	QUANTITY	TOTAL WEIGHT	PRICE
Trail Mix	700 cal/cup	4 cups	2.2 lbs	\$11.99
Bars	200-300 cal	16 bars	2 lbs	(\$9.94 x 1.5) \$14.91
Jerky	160 cal/ 2 oz.	1 large bags	~1 lbs	\$10.98
DINNER	CALORIES	QUANTITY	TOTAL WEIGHT	PRICE
Rice x3	675 cal/cup (uncooked)	4 cups	1.6 lbs	\$3.22
Black Beans 3x	662 cal/cup (uncooked)	2 cups	1 lbs	\$1.28
Mac n Cheese (annies)	~220 cal/ box	4 boxes	1.3 lbs	(\$2.58 x 4) \$10.32
Cous Cous (3x)	600 cal/ cup (dry)	2 cups	1.4 lbs	\$7.12
Chickpeas (3x)	750 cal/cup	2 cups	12 oz	\$1.59
Dehydrated Pesto	100 cal/ ¼ cup	3 packs	~1 oz	(\$1.76 x 3) \$5.28
Bullion Cubes	16 cal/ cube	One container	~	Same as leg 1
Dehydrated Veggies	280 cal/ cup	3 cups	6 oz	\$7.32
Spam	174 cal/ packet	4 packets	2.5 oz(x4) 10 oz	(\$1.28 x 4) \$5.12
Salmon	70 cal/ package	6 packets	2.5 oz(x6) 15 oz	(\$2.36 x 6) \$14.16
Olive Oil	250 cal/ oz	16 oz	16 oz	\$4.13

TOTAL:			31.4 lbs	\$155.42
TRIP TOTAL:			77.67 lbs	\$482.72
LBS/\$ PER DAY			1.68 lb/p/d	\$10.49/p/d
MEAL CALORIES:				
GRANOLA BREAK	~700 cal			
OATMEAL	~500 cal			
EGGS	~450 cal			
LUNCH WRAPS	~950 cal			
SNACKS	~650 cal/day			
RICE & BEANS	~500 cal			
MAC & CHEESE	~500 cal			
COUSCOUS & CHICKPEAS	~600 cal			

Gates of the Arctic: Food List

PERSONAL GEAR :	QUANTITY (per person for personal gear)
Synthetic T-shirt	1
Long Underwear Top	1
Fleece/wool layer	2
Puffy	1
Rain Jacket	1
Mosquito headnet	1
Sports Bra	2
Underwear	2
Long Underwear Bottoms	1
Fleece Pants	1
Hiking Pants	1
Rain Pants	1
Quick Dry Shorts	1
Wool/synthetic Socks	4
Hiking Shoes	1
Sun Hat	1
Beanie	1
Gloves	1
Sunglasses	1
EVERYTHING BELOW IS A TOTAL AND NOT PER PERSON	
SLEEPING GEAR :	TOTAL:
Sleeping Bag (~15 degree)	2

Sleeping Pad	2
Stuff Sack	2
Eye covers	2
BACKPACKING :	
80 Liter Pack	2
Trash compactor bag liner	4
Waterproof Cover	2
Trekking Poles	2
Nemo Hornet 2P	1 (shared)
Tent Repair Kit	1 (shared)
PADDLING :	
Packraft – Classic (CCOE)	2
Collapsible Paddle (CCOE)	2
Backup Hand Paddles	1
Internal Dry Bags (CCOE)	4
Extra Dry Bags - 15L	4
Packraft Repair Kit	2
Inflation Bag (CCOE)	2
Neoprene Booties (CCOE)	1
Pogies	2
Dry Suit	2
Whitewater Helmet	2
Throw Bag	2
Type V PFD	2
River Knife	2

Tow Tether	2
Locking carabiners	4
Pin kit	1
Whistle	2
COOKING :	
Pocket Rocket Stove	2 (1 backup)
1400 ML Pot w/cover	1 (shared)
Lighter	3
Pocket Knife	2
Sawyer Squeeze filter	1
Bleach	2 oz
Spoon	2
Mug	2
Collapsible bowl	1
4 oz MSR Fuel Canister	3
Nylon tarp (cooking tent)	1
Windscreen	1
TOILETRIES :	
SPF Lip Balm	2
Tooth Brush	2
Floss	1
Insect Repellent	1
Sunscreen	1
Hand Sanitizer	1
Trowel	1

Toilet Paper	½ roll
Toothpaste	1
Hair Ties	5
Tampons	Month supply
MISCELLANEOUS :	
Waterproof Watch	2
Headlamp w/batteries	2
Extra AAA batteries	6
1-Liter Water Bottles	4
Compass with mirror	2
50 ft. P-cord	2
8 ft. Duct Tape	2
Sewing Kit	1
3' Cam Strap	2
Bear Vault BV500 Canister (Bettles NPS station)	2
15L Ursack All-Mitey XL	2
Bear Spray	2
Air Horn	2
Maps & Waterproof bags	2 sets
Garmin inReach (CCOE)	1
Satellite Phone (CCOE)	1
Charging Bank	1
InReach Charging Cord	1
Journal/Pen	2
Bandana	2

First Aid Kit	1
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Gates of the Arctic: First Aid Kit

FIRST AID :	
<p>Nitrile gloves (2 pair) 12 cc irrigation syringe (1) Ziploc bag (4) Trauma shears 4" (1) Thermometer (1) Medical waste bag (2) Hand sanitizer (1) Emergency blanket (1) Tweezers (1) Safety pins (4) Guide to wilderness medicine (1) SOAP note outline (1)</p> <p>Acetaminophen 500mg (20) Ibuprofen 200 mg (30) Aspirin 325 mg (4) Tums (10) Antihistamine (diphenhydramine 25mg) (5) Sting stop (1oz) Oral antibiotics (Rx) Loperamide HCL 2 mg (3) Sam splint (1) Sunscreen (1 tube) KT Tape (4 strips) Foam blister donuts (4)</p> <p>Trauma pad 5" x 9" (1) Non-adherent dressing 3x4" (2) Sterile gauze dressing 2x2" (3) Sterile gauze dressing 4x4" (3) Wound closure strips ¼" x 4" (10) Triangular bandage (2) Transparent dressing (4) Adhesive bandages 1" x 3" (10) Butterfly bandages (10) 3" conforming gauze (3) Mole skin (10 pieces) Medical tape roll 1" (5 yards) Athletic tape roll (5 yards) Antiseptic wipes (6) Cotton tip applicator (2) Antibiotic ointment (1 tube) Benzoin tincture (2) Iodine tincture (2)</p>	

Gates of the Arctic Budget

TRANSPORTATION

████ - Fairbanks (round trip Devan): \$344

████ - Fairbanks (one way Zinnia): \$162

Fairbanks - ██████ (one way Zinnia): \$306

Fairbanks - Bettles (round trip D+Z): $\$340 \times 2 = \680

AK Airlines checked bags: $\$30 \times 4$ (round trip D+Z) = \$120

Wright Air checked bags: $\$54 \times 2$ (round trip D+Z) = \$108

Float Plane from Bettles to Gaedeke Lake – Brooks Range Aviation: \$1,593

Resupply float plane at Hunt Fork Lake: \$1,374

One room at Bettles Lodge, one night accommodation (Aug 10th): \$250

TOTAL: \$4,937

FOOD & FUEL

Food: \$482.72

Food shipping – 70lbs. (USPS, CO Springs - Bettles AK): \$183.84

Fuel: $(\$5.99 \times 3) = \17.97

TOTAL: \$684.53

GEAR RENTALS

\$0 (Ahlberg Gear House rental costs will be out-of-pocket or covered by CCOE staff discount)

MAPS & BOOKS

\$0 (any funds for maps will covered by participants)

PERMITS

\$0 (there are no permits required for Gates of the Arctic National Park and Preserve)

CARBON EMISSIONS OFFSETTING

\$47.54

TOTAL EXPEDITION COST

\$5669.07

Funding Request: **\$5000** (\$2500/participant)