

Ritt Kellogg Memorial Fund – Proposal Evaluation

Proposal Title: _____

Applicants: _____

*previous grantee

Reviewer: _____

General Criteria

- Minimum 12 days in field
- Wilderness-based
- WFR of each team member will be current prior to trip departure
- Start of trip no later than 8 months after graduation
- Expedition team is made up of at least two CC students
- Expedition will occur in US or Canada
- First aid kit
- Maps

Proposal Completeness

- Emergency contact information
- Insurance
- Medical release
- Applicant questionnaire
- Relevant experience resume
- References provided
- Certificates and other proof of training
- Participant acknowledgement and assumption of risks & release and indemnity agreement
- Ritt Kellogg Fund Agreement
- Complete proposal as per web site

Proposal Elements

Relevant Experience of Team Members

- Members have relevant experience in the activity
- Members have relevant experience in the venue
- Members have relevant experience in backcountry conditions, including inclement weather
- Members have relevant hazard evaluation skills
- Members have taken additional classes or training for the activity
- Members have relevant decision-making/route finding experience
- Overall, team members will solidify skills on the expedition rather than “cut their teeth”
- References and certifications

Risk Management Plan

- Proposal identifies thorough list of hazards associated with the activity

- Proposal identifies thorough list of hazards associated with the venue
- Proposal identifies thorough hazard evaluation plan
- Proposal identifies sensible steps to avoid incidents
- Proposal identifies a sound management plan if incidents occurs
- Proposal includes reliable emergency communication plan
- Proposal includes well-planned emergency evacuation plan
- Proposal lists the first aid kit contents which are appropriate for activity, venue, size of group, and participant health conditions

Logistical Considerations

- Proposal states dates of expedition and total days in field
- Proposal includes reasonable travel plans to and from the trail head
- Proposal details a sensible, day-by-day itinerary including elevations, distances, and camps
- Proposal provides a detailed route description, including maps
- Proposal provides minimum impact techniques
- Proposal provides cultural considerations (if applicable)
- Proposal provides appropriate gear list for activity and venue
- Proposal provides appropriate food list for activity and venue and considers re-rations
- Proposal includes a service component

COVID-19 Preparedness

- Proposal includes an analysis of the current COVID situation in the proposed location
- Proposal includes a realistic pre-expedition plan for reducing COVID likelihood
- Proposal includes realistic travel considerations
- Proposal includes an appropriate planned response for managing COVID in the field

Budgetary Considerations

- Proposal provides itemized budget
- Proposed budget does not include capital equipment purchases
- Proposal includes reasonable travel costs
- Expedition cap per person is \$1,500 (12+ days) or \$2,500 (21+ days)

Reviewer's Conclusion

Should the expedition be funded? _____

What are the total funds requested by the team? _____

How much funding do you believe the team should be awarded? _____

Is anyone on the team requesting additional financial support for a WFR course? _____

RKMF Expedition Summary

EXPEDITION NAME: Land Before Time: Alpine Climbing in Pangea Valley, British Columbia

DATE OF EXPEDITION: 8/1/2024-8/14/2024

EXPEDITION MEMBER DETAILS:

Team Member	Graduation	Emergency Contact	WFR Cert
Savian Czerny	2025	[REDACTED]	Recert scheduled for 4/2024
Wiley Holbrooke	2025	[REDACTED]	Recert scheduled for 6/2024
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

TOTAL FUNDING REQUEST: \$3,000

MAP OF ROUTE: <https://caltopo.com/m/634A0/0CKQUMFR3E026NS4>

LOCAL EMERGENCY NUMBERS & COMMUNICATION TOOLS:

Closest Hospital: Kitimat General Hospital and Health Centre, 920 Lahakas Blvd S, Kitimat, BC V8C 2S3, Canada

Normal: +1 250-632-2121 Emergency: 911

ER open 24/7

Helicopter Rescue: Kitimat Search and Rescue (20 miles away), Kitimat, BC, CA 911 for emergency calls or 250-632-8945 for non-emergency.

Will have a Somewear Hotspot.



Ritt Kellogg Memorial Fund Registration

Registration No. GHBQ-M7TD6
Submitted Jan 24, 2024 9:00am by Savian Czerny

Registration

Aug 21, 2023-
Jan 24, 2024

Ritt Kellogg Memorial Fund
RKMF Expedition Grant 2024 Group Application

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.

Waiting for Approval
Jan 24, 2024
9:00am

In addition to this Group Application, **each team member must submit an Individual Application**. All Group Applications and Individual Applications must be received by 1st Wednesday of Block 5 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>

If you have any questions please email the office of Outdoor Education
outdoored@coloradocollege.edu

Participant



Savian Czerny
[Redacted contact information]

Expedition Summary

What is the name of your proposed expedition?

Land Before Time: Alpine Climbing in Pangea Valley, British Columbia

Briefly describe the objectives of your expedition.

The main objective of this expedition is to explore the beautiful and remote Pangea Valley in the Foch-Giltoyees Provincial Park in the Coast Range of Canada. The main objective of this trip is to repeat the ascents of four new routes that have been developed in Pangea Valley—routes developed in 2019 and 2021 by another party of three from University of British Columbia. This stated, the climbs are only half of the adventure for us. Unlike the previous expedition team, which flew in via helicopter, we plan on accessing this valley by land, using a jet boat and our own six feet to get us into this remote valley. Although logistically and physically more demanding, for moral reasons we actively chose to not use a helicopter for this expedition. We want to really understand how remote the valley we are hiking into is, and if there is a place to minimize our carbon footprint, we are going to take that option.

Briefly describe the location of the expedition.

Our trip will be located in the Foch-Giltoyes Provincial Park in the Coast Range of British Columbia, Canada. These are some of Canada's most remote and least accessible mountains, and are home to valleys as dramatic as Yosemite, but as untraveled as anywhere. See the Trip Itinerary, and Digital Caltopo Map for topographic maps and photos of the area.

Date that travel to the expedition will start.

Aug 1, 2024

Date that your team will enter the field.

Aug 3, 2024

Date that your team will exit the field.

Jan 14, 2024

Date that the last team member gets to their home location.

Jan 23, 2024

How many days will your team be in the backcountry?

13

How does your planned destination provide a "wilderness experience," and how will your expedition offer solitude and promote self-reliance and grit?

It was only a few weeks after our previous expedition (Boys in the Bugs *CC Edition*) before we were already missing the lure and incredible beauty we had left behind in the Bugaboos. Savian and Wiley were hooked on the extreme and surreal nature of the British Columbian mountains, and wanted to see what else there was to explore. Randomly, one afternoon, while scrolling through the Coast Range on Google Earth, Savian came across a valley that even through the google 3d modeling looked incredibly vast and dramatic. Savian immediately became obsessed with finding out whatever he could about this valley. To his dismay, after days of research, he found no information on the valley and was going to give up, believing no one had been there before, and that it was too far away to find out easily for himself. It was then that he noticed an American Alpine Club post about a recent climbing expedition to a remote, unexplored valley in the northern regions of the Coast Rand of BC. Sure enough, this was the exact valley Savian had discovered on Google Earth, and in a moment of serendipity, this expedition team had also discovered the valley via Google Earth and had decided to go explore the potential climbing it might bear. At this moment Savian knew it was meant to be to go explore what has now been nicknamed Pangea Valley, and he knew exactly who to call to join him on this adventure (none other than Willey Holbrooke). Since then, Savian also invited onto the team his friend from outside of CC, Ben King, who is a perfect addition to the Bugaboos team, a third person adding a layer of safety to an expedition of this nature. Thus, an idea sprouted into planning, taking form in this grant application. From what we have learned, and seen through Google, the landscape is as old but unique as time itself, giving this valley's name all the more weight—massive granite walls ascending from glaciers with a glorious alpine lake and river below. The remote yet lush forest below and the humbling mountains above are part of what makes this region so luring, but despite the timelessness of these mountains, it is crucial to acknowledge that they are dynamic and alive. This dynamism is not solely because of the many animals that inhabit this wilderness, but also because of the ever changing nature of the mountains. The glaciers are often shifting (and too-often melting), the rocks are often loose, and the weather is often described as temperamental. This temperament does not detract from its beauty, but paired with the remoteness of the area, our ability to balance its beauty with our safety will be a priority for us on this trip. Balancing this draw to the remoteness and dramatic beauty with rationality and precaution will be the number one goal of this trip. Despite whether we succeed or not in our planned objectives, this trip will forever be remembered and loved for the simple possibility of being able to visit such a beautiful and remote place.

Participant Qualifications

Expedition team member information

Savian Czerny: WFR expiration 01/19/2024, scheduled WFR recert April 2024

Wiley Holbrooke: WFR expiration 07/10/2022, schedule WFR recert summer 2024, EMT expiration 03/21/2025



Does your team have adequate experience?

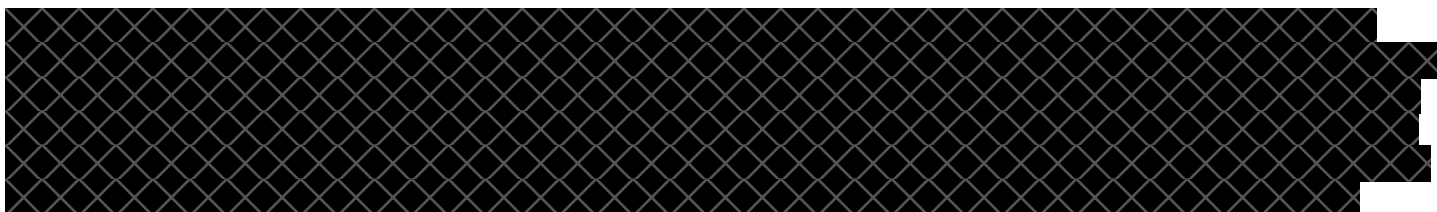
Yes

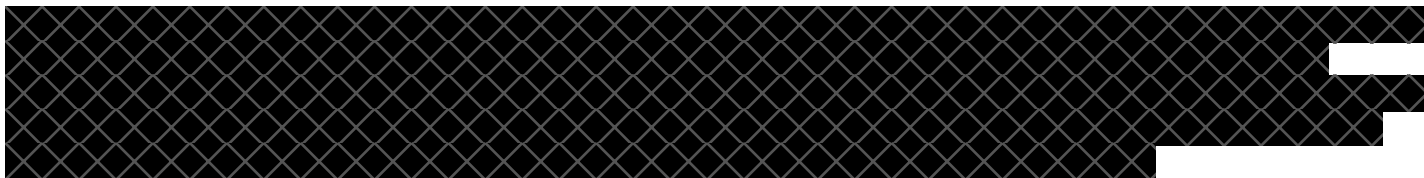
Describe your team's training plan to solidify or improve technical skills, physical conditioning, and team dynamics prior to the start of the expedition.

For this trip, all members of the team have more than adequate technical experience needed to make this expedition safe, successful, and efficient. With this said, our team is aware of our different strengths in the different environments we will encounter in the Foch-Giltoyees Provincial Park. Our plan is to lean into our different strengths, learning and improving off of each other's separate and shared experiences.

Despite massive obstacles associated with any expedition of this kind, Wiley has the skills and background necessary to continuously identify risks and adjust accordingly. He has experience with glacier travel, snow travel, and has spent countless hours on rock learning and making decisions. His experience, however, is not limited to the personal realm of big walls (Grade III and up). Much of Wiley's experience comes from a professional setting, where decision making is necessary for the outcome of an entire group of people. In October of 2020, he completed his Rock Guide Course, for which the scope of practice involves guiding up to Grade III climbs. Since then, he has spent two years guiding rock, ice, and via ferrata. In August of 2020, he joined San Miguel County Search and Rescue, which requires professional understanding of all mountainous environments. He has been a member of multiple rescues in the San Juan mountains—each a high-stress test of physical and emotional strength. Although Wiley is fortunate enough to have professional experience in the mountains, it stems from a pure love of the rocks that surround us. His personal resume includes multiple Grade IV+ climbs and hard climbing in every discipline from bouldering to single-pitch trad climbing to alpine. This includes climbs in the Black Canyon of the Gunnison, Indian Creek, Chamonix, Yosemite, and the Bugaboos. He has established first ascents, both single pitch and multipitch, on a variety of rock types and terrains. As far as non-rock disciplines (snow and ice), his professional experience involves an AIARE Avy 1 course taught in a SAR context, snow safety and ice-specific SAR trainings, an EMT certification, as well as a glacier travel and rescue course. Personally, he has done alpine routes in Chamonix and the Bugaboos, and backcountry skied many times.

As for Savian, he aims to be a well rounded climber and plans to utilize these different skills in the Foch-Giltoyees Provincial Park. Although lacking the same professional resume as Wiley, Savian has a technical rock climbing resume that highlights his level of skill and technique. Savian has climbed routes including grade III-V faces on The Diamond (Longs Peak), El Capitan, Elephant's Perch (Idaho), El Torro (El Potrero Chico), Big Rock Candy Mountain (South Platte)(climbed with Wiley), Bugaboo Spire (the Bugaboos), the Black Canyon, Cerro Trinidad Norte (Cochamo) as well as many smaller endeavors on Pikes Peak, the rest of South Platte, and Eldorado Canyon. Outside of rock climbing, Savian has spent six winters backcountry skiing at his uncle's ski lodge in the heart of the San Juan mountain range. Although Savian has no formal avalanche training he has learned crucial snow travel skills and snow science from certified mentors such as his uncle and friends, and he has taken an official crevasse safety and rescue course.





Before the trip begins, Wiley will have re-certified his WFR through 05/27/2025 and has his EMT to supplement our previous skills and knowledge and increase our safety when approaching and descending from our objectives. Due to the unlikelihood of avalanches in late July and Early August in Pangea Valley where we are traveling to, our group's knowledge of avalanche safety seems adequate without additional certifications.

Beyond technical certifications and training, we understand the need to physically train in order to prepare ourselves for the objectives we wish to be successful on. Over the course of the next few months, Savian, Wiley, and Ben will be utilizing their weekends, block breaks (for Savian and Wiley), and summer to hone in their granite crack climbing skills, as this is the style that will be found in the Coast Range of Canada. We will train in the areas such as the Black Canyon of the Gunnison with goals such as Astrodog 5.11+ 14 pitches and Tague Your Time 5.12, 15 pitches. If we can complete these objectives, the physical demand of the Pangea Valley can be met. Also, we are always looking to improve our technique and strength as climbers, and months before the trip we will be continuously working on our finger strength and footwork by training in our local climbing gyms, as well as the other necessary climbing skills. Beyond the climbing physicality needed, serious preparation will be needed in order to prepare for the long, multi-day approach to the valley. We will train by attempting alpine routes in RMNP with long approaches, and we will train with heavier packs in order to mimic the long approach to be found on the expedition.

Expedition Logistics, Equipment, and Food

Briefly describe how each expedition member will travel from home to the trailhead and back again.

On August 1st, Wiley will depart from his home in Telluride, CO and meet Savian and [REDACTED] at Savian's home in Colorado Springs [REDACTED]. From there, on the 2nd we will leave early in the morning and get dropped off at the Colorado Springs Airport, where we will fly to Denver for our connecting flights that will take us to Vancouver, and on to Terrace, BC. We will then take a bus south to Kitimat where we will reorganize gear, coordinate with our jet boat driver, Andreas Handl, grab our pre-purchased bear trash can, and spend the night at a B&B in town. The next day we will load our gear into the jet boat and leave by 8 am. We will then head west down the Douglas Channel before cutting north into the Giltoyes Inlet where we will continue up the Giltoyes Creek for approximately 10 miles. This is where the trip really begins. On the way back, we will coordinate and be picked up via jet boat at the same location, and reverse our travel plans exactly. We will travel back to Kitimat, spend the night, then take a bus terrace the next day to catch a flight back to Colorado Springs via two connecting flights, and then Wiley and Savian will almost immediately resume school once more.

*As said before, we will be flying back from the northern regions of Canada 8 days post trip. Although our backcountry trip is 13 days in a beautiful and remote area, we all want to spend a little more time in the region exploring on our own time before taking the return flights home.

Upload a detailed day-by-day itinerary, beginning when the first team member leaves home.

[Full Itinerary Pangea.pdf](#) (31MB)

Uploaded 1/24/2024 8:22am by Savian Czerny

Please paste a URL to your complete digital expedition map.

<https://caltopo.com/m/634A0/0CKQUMFR3E026NS4>

If you have plans to re-ration during the expedition, describe the plan below

As mentioned in the general itinerary, we will have a re-ration for this expedition since the trip is similar in length as the Bugaboos expedition. Additionally, since the food will be a significant amount of weight to carry 8 miles and 2,000+ feet of elevation gain, our stint between food re-ration trips will be shorter in length to keep the amount of weight we have to carry at a safe level. The re-ration will occur on day 8, where we will either hike the 16 miles round trip and make it back to base camp, or camp mid way and split the journey into two days.

Describe how you will protect your food from wildlife.

As stated in the general itinerary, our plan for food storage is thorough, but not necessarily standard protocol. Our food for this trip will largely be presealed as MRE kits (Mountain House meals) or other small presealed snacks, and oatmeal, so we will already be limiting the smells of our food, however, we will additionally be storing our food in scent proof plastic bags, within a durable and tough trash can, which we will hoist into the air on a strong old growth tree branch, to keep it as inaccessible to bears and rodents as possible. We considered having someone drive out on a jet boat for the food drop, but the price and logistics of having to be there at the same time deterred us from that plan and towards the trash can plan. And in this way, we can also store additional gear and resources that we might find useful further into the expedition. At any point if our rations have been lost (which is unlikely) due to bears or other unforeseen circumstances, we will return to town, reassess and plan on what to do next. At base camp, we will be storing our food in bear proof bags called Ursacs, which are also rodent proof—animals which are much more of a threat at high altitude. We will also be burying these bags in a scree field, which is standard LNT protocol while backpacking above tree line.

Upload a detailed food list with budget numbers and show hoe it meets the caloric needs of the expedition.

[_24 Updated Food List.pdf](#) (57KB)

Uploaded 1/24/2024 8:28am by Savian Czerny

Upload a thorough equipment list.

[_24 Equipment and First A....pdf](#) (50KB)

Uploaded 1/24/2024 8:28am by Savian Czerny

Upload a first aid kit list.

[_24 Equipment and First A....pdf](#) (50KB)

Uploaded 1/24/2024 8:29am by Savian Czerny

How will you limit and leverage your impact on this trip?

All three members of this trip are experienced with LNT principles through summer camp jobs and proper backpacking practices. We are dedicated to utilizing these principles throughout our trip.

Plan Ahead and Prepare: Planning ahead is important in order to avoid unneeded impact, and also putting yourself in dangerous scenarios where you might need to use impactful practices such as fires or emergency shelters. This application takes up the majority of our planning for the trip and will adequately prepare us for our expedition. However, we will also focus on packing everything including our food as minimally as possible as to avoid excessive trash while camping.

Travel and Camp on Durable Surfaces: We will be spending the majority of the expedition crossing and camping on snow and glaciers, which will allow us to minimize our impact. If and when we come across watermelon snow, we will carefully avoid disturbing it. When not on snow or glaciers, we will minimize impact by not following each other and creating more impacted trails. Since we are traveling to such a remote area, the environment will bounce back quickly from whatever little impact we leave behind.

Dispose of Waste Properly: We will take extra care to pack out all of the trash we create, especially micro-trash. We will make sure to dispose of human waste properly by digging cat holes at least the depth of our 6" shovel. Dishwater will be buried in a sump hole 200+ feet from the nearest water source. All food and waste scraps will be packed out at the end of the trip.

Minimize Campfire Use and Impact: We will not be having campfires on this trip and through our in depth planning we will be avoiding the need for an emergency fire.

Leave What You Find: We will only be taking photos and experiences from Pangea Valley, so as to not disturb the landscape for future parties. If trash or other modern human trash is found in the backcountry, we will also pack this out.

Respect Wildlife: If we see any wildlife we will respectfully admire it from a distance. We will not harass or chase any of the high alpine species such as marmots that we encounter. The area we are camping in has permanent bear boxes, therefore reducing personal risk and risk that animals will interact with humans in this more densely populated area.

Be Considerate of Other Visitors: Although we do not plan on seeing any other people where we are headed, we plan on being very considerate of the other groups of climbers if we do come across them. We plan on being very congenial and open to meeting new friends, while also understanding that many people come to this area to experience the incredible beauty and serenity of the Coast Range, and prefer to appreciate it alone in peace. We will also be considerate of people's comfortability with the current state of COVID-19 and will maintain a six foot distance from other groups for their sake and ours.

Additionally to lower impact on a global scale we are limiting the amount of flying by not taking a helicopter into Pangea Valley, which also limits the amount of disturbance we will be causing in this serene area. In order to counter our carbon footprint we will also be considering carbon offsetting for the expedition which for the amount of flying we will be doing is \$14.89 for the 2.98 metric tons of carbon dioxide we will be emitting.

Risk Management

What are the main objective hazards of the expedition?

Rockfall and Icefall:

As previously mentioned, mountains are dynamic and unpredictable. No matter how cautious our movements are, rockfall and icefall is always a possibility. The first line of defense to protect ourselves from such a hazard is our ability to navigate through the mountains on generally durable terrain. In other words, the shapes and sounds of rock and ice can give clues on the soundness of it. The best way to travel on durable rock is to stick with well-traveled routes, but in the case of this expedition most routes will be largely untraveled. Our next tool to mitigate this risk is our judgment in regards to bad rock. If a rock is loose, generally a tap with the knuckles can help us determine its strength (hollow sound is not trustworthy). A visual inspection can also determine if a hold is unstable. Next — if the rock's fragility is undiagnosable — our protocol is to shout "ROCK" to warn all parties of the falling heavy object. Our purpose in this exclamation is not to allow time to watch and dodge the falling rock (watching the rock defeats the point of a helmet), our goal is to get others to get close to the wall and maximize the effectiveness of their helmet. In the guiding business, we explain this action as "turtling up." Lastly, if our terrain is somehow unstable, if the rock is unpredictably bad, and if the person above cannot warn the person below in time, our helmets can be our final resort. The modern climbing helmet can deflect a rock that would otherwise cause a brain injury. Helmets are absolutely mandatory for any time there are rocks above us. This order of operations can significantly reduce the likelihood and consequence of rockfall causing harm. Rockfall and icefall can only be fully avoided by staying away from the mountains. Therefore the nature of Pangea Valley includes the potentiality of rockfall regardless of judgment. However, with good judgment and working helmets, the chances of unexpected, precise, large rockfall to hit one of us is not impossible but certainly unlikely. Icefall is far less likely given our wish to stick with rocky terrain, but the order of operations remains the same to rockfall. Good judgment and appropriate tools must be exercised regardless of our terrain.

Injury:

Due to the nature of our expedition, potential for getting injured inherently exists. The causes of these injuries would most likely be either climber fall or rockfall. The only acceptable way to deal with injury is to prevent it

from happening. With regards to rockfall, see "Rockfall and Icefall" above. With regards to climber fall, many risk mitigation strategies exist. First, we are all confident in our ability to not take unexpected falls in alpine terrain. If we are uncomfortable with the terrain we are in, we all have the judgment and ability to either aid climb through that section, or turn around. We are all completely comfortable with the prospect of not getting to the top. No summit is worth the risk of an injury. After our hands and feet, our second line of defense is our protection and rope. Savian, Wiley and Ben are perfectly comfortable placing traditional (trad) gear to protect falls. We trust each other as belayers and as climbers. We all have the knowledge and skills to avoid falling in a place that would cause an injury. The potential of falling unprotected or in a spot without an adequate catch is slim. Lastly, if an unpredictable series of events causes one of us to get injured, the other is perfectly capable of getting them off the wall and performing wilderness first aid if that is required (as was seen in our Bugaboos Ritt expedition). Rappelling off the wall with an injured partner is a skill we all have practice with. In this scenario, we will rappel the route with the injured partner and safely retreat back to the campground and reassess.

Specific Injury on Approach: Machete Usage

Although not a usual accident to have to consider for a climbing trip, the nature of the approach for this expedition means new and unique challenges and risks. Machetes are incredibly useful tools, especially in clearing a path to move forward, but they are also inherently dangerous, and as previously stated, in the remote backcountry, there is little room for error. All three of us are practiced in using machetes or machete-like tools for outdoor uses, but it is still important to mitigate the risk. In order to mitigate the dangers of using a sharp tool, we plan to only use the Machete when it is absolutely necessary to, and then when we are, to be very aware and cautious of our use—always stroking forward and never towards ourselves, and making sure everyone else is a safe distance away from the person using the Machete. The worst scenario with a sharp object such as a Machete involves someone cutting into themselves deep enough to cause intense bleeding. In this scenario we will have a tourniquet to stop the person from bleeding out, and we will have a satellite communication device to call in an emergency helicopter. Although this is highly unlikely and the worst case scenario, it is important to consider the extremes of what could happen.

Getting lost:

In the backcountry, there is always the possibility of getting lost, therefore stranding yourself from resources you need to survive. Getting lost can often be a more serious issue in flat, tree-covered landscapes where it is difficult to get bearings since everything looks the same. In the FOch-Giltoyees provincial park, this will be less of an issue because of the mountainous and alpine-style environment. Savian, Ben, and Wiley have the knowledge to navigate unfamiliar mountains without getting lost. In order to mitigate the risks of getting lost, we will always have downloaded maps on our phones as well as paper maps and headlamps in case it gets dark. If we do truly become lost and we cannot find our way back to camp, our final resort is a satellite phone, which can locate us and tell local SAR teams of our position.

Glacier Travel:

The climbing in the Foch-Giltoyees Provincial Park is perfect for beginner alpine-style climbers, because although the objectives are almost completely granite, the approaches require moving across a few glaciers. Glaciers can be very dangerous with hidden crevasses that you can fall into without the proper precautions, but luckily, all members of this expedition have taken a crevasse rescue and glacier travel safety course and additionally practiced building snow and ice anchors, self arresting, building 3-1 and 5-1 direct haul systems along with 2-1 and 4-1 drop loop hauls as a team on their own time. We additionally have hands-on experience in the glacial environment of the Bugaboos. When needed, we will make sure to always carry the necessary gear such as ropes, axes, ice screws, and anchor material in case of a needed crevasse rescue. This said, most of the snow should have melted off of the glacier by late July, therefore exposing the crevasses and making them easily avoidable. Upon arrival, we will discuss our objectives with the locals of Kitimat and obtain more current and accurate information on what crevasses and glacial challenges may directly impact our approach to Pangea Valley. We will take note of the current and changing glacial information and adjust our itineraries accordingly. In the case of a fall into a crevasse, we will follow our training, set up a haul system, and pull our partner out of the crevasse (we will be attached by a rope). From there, we will assess their state and either retreat back to camp, or if need be, call in rescue in the need for a rapid evacuation.

Steep Snow, Ice and Avalanche Potential:

Avalanches are unlikely in late July and early August in this area, which is one of the many reasons this time of year is so incredible for exploring the coast range of BC! That said, this never rules out avalanche completely and for this reason we will approach our missions with the knowledge needed to assess snow conditions. Avalanches can be caused by a multitude of factors, and large avalanches can create very serious danger. Wiley, Ben, and Savian all have many years of backcountry skiing in the San Juan mountain range under their belt (Wiley is also certified AIARE level 1) and these skills will come into play in the event that we encounter steep snow slopes. Our biggest worry this time of year is the possibility of wet slides, in which case we will avoid by crossing snow fields early in the morning when the snow is still frozen and solid. That said, we will be avoiding steep snow whenever possible, and the majority of our itinerary already avoids these areas. Similarly with steep ice, we will avoid it whenever possible and utilize proper crampon and ice ax techniques to safely surpass if needed. The avalanche risk is low enough that it is unnecessary to bring normal backcountry skiing equipment (beacon, probe, shovel) and therefore in a worst case scenario where someone is buried by an avalanche, the safe partner would immediately call in help via the Somewhere hotspot and do their best to track down their partner. Realistically, this will not happen unless there is an unprecedented amount of snow in late July. We will continue to monitor the weather in the area, and if there seems to be an incredible amount of snow, we will reassess and potentially bring avalanche safety gear (beacon, probe, and shovel).

Hanging Glaciers:

Due to the nature of Pangea Valley, there is risk of hanging glaciers towering above the 1,000+ foot cliffs on either side of the valley (most significantly the south side of the valley). In order to minimize the risk that these hanging glaciers impose, we have chosen a base camp that is closer to the north side of the valley, which is far away from where the hanging glacier would fall, if there was a large slide. Additionally, whenever possible we will avoid walking under cliffs with hanging glaciers above, and we will avoid climbing underneath the hanging glaciers.

Wildlife:

The Foch-Giltoeyes area is home to a variety of animals including grizzly and black bears. Although black bears are not known to be aggressive, interactions with grizzlies can prove to be deadly. Growing up in Colorado, the three of us have plenty of experience with black bears and how to avoid injury from them but this experience does not translate in totality to grizzly bears. In order to mitigate interaction with these bears, we will follow all proper bear protocols including no food in or near the tent, leaving food in the designated bear bag hung in a tree or buried in scree, and we will also be cautious on our climbing goals, staying on well assessed and visibly clear paths to and from the climbs. In the event of an interaction, we will be carrying bear spray on our waist belt, which is our last result in protecting ourselves against the bear. In the event of a bear attack where we survive, if injury is severe and we are unable to travel back to the campsite, we will call in a rescue team via the Somewhere hotspot.

Describe your self-evacuation plan in the event of an emergency.

Although hopefully no injuries will occur on this trip, we acknowledge that even with the best of risk-mitigation techniques and well experienced team members, serious accidents can still happen. In any scenario we find ourselves in, our evacuation plan will be rooted in the severity of the situation and our assessment based upon our Wilderness First Responder Training and Wiley's Search and Rescue training. Evacuation will be assessed on whether we must self-evac, assisted-evac, or assisted rapid evac. In the case of a self-evacuation, the non-injured partner will help assist the injured partner in whatever way is deemed safe and within the practice of a trained WFR. For example, if one of us breaks an arm halfway up a route, Wiley, Ben, and Savian know how to fashion temporary splints, pulley systems, prusiks, third hands, etc. to help them retreat to the base of the climb. Upon arrival back at base camp, in any self-evacuation, we will then hike down the Pangea Valley, back towards the Jet-Boat pick up spot where we will be driven to the nearest hospital in Kitimat, BC. In case of any sort of assisted evacuation (rapid evac or not), we will have a Somewhere hotspot that can immediately notify emergency resources of our distress via multi word text messages. In an assisted evacuation, our partner will do

everything within their practice as a WFR to aid in their partner's survival. In the case of evacuation due to weather or natural disaster, dangers are low. If we find ourselves caught in a snowstorm we will work our hardest to evacuate efficiently and safely back to the ground (if on route) and hike back to our camp. Ideally all scenarios described above will be avoided through calculated and educated risk mitigation. All members of the expedition are members of the American Alpine Club which will cover up to \$300,000 in rescue coverage.

Discuss any measures taken for teammates with medical histories which warrant special preparedness.

Neither Savian, Wiley, or Ben have any serious medical condition or history that would warrant special preparedness for this expedition. This said, we are going into the mountains far from where we all consider home, so we will emphasize mental health and being there for each other.

List the emergency and rescue resources available in the vicinity of your expedition.

Closest Town: Kitimat (~20 miles via helicopter, ~53 miles via hiking, boat)

Closest Facility to Base Camp: Small Fisherman's Hut (18 miles away via hiking 8 miles, then 10 mile boat ride)

Closest Hospital: Kitimat General Hospital and Health Centre,
920 Lahakas Blvd S, Kitimat, BC V8C 2S3, Canada
Normal: +1 250-632-2121 Emergency: 911
ER open 24/7

Helicopter Rescue: Kitimat Search and Rescue (20 miles away), Kitimat, BC, CA
911 for emergency calls or 250-632-8945 for non-emergency.

List the emergency communication devices you will be carrying on your expedition. If none, explain why.

We will have a Somewear Hotspot which can send communication to anyone from anywhere in the world. In the case of an emergency, the Somewear Hotspot has an SOS button that immediately dispatches local SAR teams to our location. It also allows for two-way communication with SAR if we have our phones on us. If the Somewear Hotspot is for some reason incapacitated, we can create SOS signals with our headlamps which we will always have on us.

COVID-19 Preparedness

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

Currently Canada has a strict vaccination policy to enter Canada, but luckily Wiley, Savian, and Ben all have two doses of a COVID-19 vaccine as well as booster shots and, therefore, are allowed to enter Canada. For the Foch-Gilitoyees Provincial Park and the rest of British Columbia, COVID-19 case rates are relatively stable and low. Additionally, the death rates are still very low in Canada and dying from the COVID-19 with full vaccination and booster is highly unlikely.

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

Because we are flying and then traveling on a bus to reach Kitimat, where our expedition begins, the worry for exposure is higher than if we were to travel via car, however, with current Covid rates, the use of K-N95 masks, and washing hands frequently, the risk of being exposed to COVID-19 is very mitigatable. Wiley, Ben, and Savian are fully vaccinated and also have multiple booster shots, which will help mitigate the risk of exposure. We will also carry hand sanitizer to use after touching germ-dense surfaces such as door handles (as an extra precaution despite COVID-19 being most largely transmitted by air).

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

to COVID-19?

In order to protect the locals of Kitimat and Terrace, we plan on wearing K-N95 masks for all interactions outside of our expedition team whether they are outside or inside. *This way we protect ourselves and others from spreading any variant of COVID-19.

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

In the field, our team plans to stay as a "Family Unit" by limiting contact with other parties. When/if we are interacting with other climbers, we plan on keeping six feet of distance between us and them to protect each other as recommended by CDC guidelines. We plan on always having masks on us in the scenario we encounter other people

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

In the situation that someone on our team develops COVID-19 symptoms, we will have them, as well as the other team member, test using an "At-Home" COVID-19 test that we will have available with us. If either member tests positive for COVID-19, we will reassess on our expedition and depending on severity either go straight to a hospital in Canada, or have on hand proper N95 masks, rest and quarantine in Kitimat for a week or until we are no longer symptomatic. Hopefully then, the expedition can be resumed. If the case of COVID-19 is extremely mild, we will stay in the field, and continue our expedition with caution.

Budget

Upload a detailed and complete expedition budget.

[Trip Total Budget Pangea.pdf](#) (50KB)

Uploaded 1/24/2024 8:32am by Savian Czerny

What is the total funding request for your trip?

\$3,000

What is the funding request per person?

\$1,500

Describe what measures you have taken to minimize expenses for your expedition.

For this expedition, costs are being managed most importantly by calculating for the most reasonable, and also carbon friendly form of travel to reach the remote Pangea Valley. Although it would have been nice to drive, logistically it would take us much much longer to reach Kitimat, so instead, we are focusing on limiting the costs of travel at the final stage of transportation by taking a jet boat instead of a helicopter. This requires more logistics, and hiking, but keeps the adventurous aspect of the trip more intact, while also saving money, and carbon footprint. Also, with our food budgeting we avoided bringing any sort of insanely expensive foods for breakfast and lunch, saving the pre-packaged backpacking meals only for dinner. The main reason we have budgeted for these in the first place is simply to save on weight, since all of the prepackaged meals are completely freeze-dried and weight is incredibly important for our approach up Giltoyees Creek. We are also saving money by choosing to camp in a location that does not require fees, and by taking cheaper transport whenever possible (Bus from Terrace to Kitimat).

Expedition Agreement

The Expedition Agreement must be printed, read, and signed in ink by each member of the expedition team. Once the Agreement is filled out, it should be scanned into PDF format and uploaded here. The group application will not be considered complete until this form is submitted

[RITT KELLOGG MEMORIAL FUN....pdf](#) (806KB)

Uploaded 1/24/2024 9:00am by Savian Czerny

Expedition Itinerary:

This given itinerary is our ideal and perfect plan for what we wish to accomplish. However, injury, route finding, and weather are all possible forms of unexpected setbacks that may force us to stray from our original plan. Ideally, all figures and maps shown below are to be used in hopes that we successfully accomplish our objectives with safety as our number one priority!

Date	Day Number	Objective/Activity
8/1/2024	Pre-Trip	Wiley will leave Telluride via car and come meet Savian and Ben in Colorado Springs, where they will spend the night at Savian's home.
8/2/2024	Day 1	We will travel together from Colorado Springs, CO to Denver CO via airplane before making our connecting flight to Vancouver, BC, before catching our connecting flight to Terrace, BC. We will then take a bus south to Kitimat where we will reorganize gear, coordinate with our jet boat driver, Andreas Handl, grab our pre-purchased bear-trash can, and spend the night at a B&B.
8/3/2024	Day 2	We will load our gear into the jet boat and leave by 8 am. We will head west down the Douglas Channel before cutting north into the Giltoyees Inlet where we will continue up the Giltoyees Creek for approximately 10 miles. Once the river valley is too steep for the boat, we will be dropped off with all of our gear (see Caltopo Map and figures 1.5 and 1.7), where we will stash most of our food for our future re-supply in one large, heavy duty trash can. As a precaution, we will store our food in odor-sealing trash bags, place them in the trash can, and seal the trash can shut using additional trash-can bear protecting straps on the lid. Ideally, this trash can will then be hoisted and hung in a large and strong old growth tree. The goal is to make our resupply as protected as possible from bears. We will camp nearby for the night.
8/4/2024	Day 3	We will wake up and leave by first light to hike the final 8 miles of our trek, following a historic first nations grease trail trading path, gaining almost 3,000 feet of elevation before making it to our base camp, below the high saddle between Gilt peak and Ecstall peak. This day will be physical and slow paced. Many of the old grease trail markers will lead us on the path of least resistance, but we will be carrying climbing and camping gear along with 5 days worth of food so we understand the hike will be slow going. We have been in touch with multiple people who have spent a significant amount of time in this valley, kayaking and climbing, and they have reassured us of the historical grease trails and their defined existence. Due to the dense

		<p>nature of the coastal range forest, we will have with us a machete to help cut the path if needed. After hiking alongside Giltoyees Creek for 3.5 miles, we will cut left, leaving the creek behind, and heading up what has been deemed “Pangea Valley” by the 2021 expedition team. This valley is above treeline, so our speed of travel will likely increase drastically. After 1.7 miles, we will reach a glacial lake where we plan on skirting the edge of the lake to the south (see Caltopo map and figures 1.4 and 1.6). The final 2.5 miles to our base camp location will be to the right of a large glacier tongue. We will assess this glacier carefully up and travel across it with glacier travel safety in mind. Finally we will make it to our designated camping area near the saddle at the farthest west end of the valley. Although planned as one day, this journey will take two days, split at a flat campsite near where we would branch left from the main Giltoyees Creek. This would be done so we could travel on the glacier when it is firmest in the early morning to minimize risk, and to account for being slowed down in the dense temperate forest.</p>
8/5/2024	Day 4	<p>(Potentially Day 5) Today will be a rest day after physical one to two days of hiking. We will take a small walk around the basin and assess the bases of our climbs as well as the levels of snowpack, water melt on faces, and general weather conditions. We will not walk far from camp, and we will not access any technical terrain. This day is to gain our bearings in our home for the next 10 days!</p>
8/6/2024	Day 5	<p>(Potentially Day 6) We will wake up at 6 am to give ourselves ample time for the approach and climb, “Planktonic Relationship” (450m, 5.8). We will leave camp by 7 am, and head uphill northeast of camp to the base of the climb. The approach for this climb will take us roughly 45 minutes, and is only 0.5 miles with ~300 feet in elevation gain. Though unlikely, if there is snow at the base of the climb, we will know from our general assessment the day before and we will have our universal crampons and ice axes if necessary. We will climb the route in our standard three-person multi pitch setup with leaders leading in ~4 pitch blocks and then the two followers following on separate lines, belayed simultaneously on an ATC guide setup. Once we reach the top of the route, we will rappel the route with double rope rappels and trace our approach as the descent back to base camp. We plan to return before 6pm in order to give ourselves plenty of time and daylight to account for unforeseen challenges. (See more in figures 1.4, 2.1, and 2.2)</p>
8/7/2024	Day 6	<p>We will rest this day in order to account for weather and also to</p>

		prepare ourselves for the following day of climbing on the Cambrian wall. We will eat food, play cards, and prepare bags and gear for the following day. *If we took two days on the approach hike, this rest day will be what in this itinerary is day 7—a climbing day if we are feeling strong and rested enough to attempt it safely. This is in order to stay on schedule for our restock in 1-2 days.
8/8/2024	Day 7	Again, we will wake up at 6 am to give ourselves ample time to reach the base of the wall and to start the climb. The approach heads in the direction of the high saddle of Pangea Valley to the Cambrian Wall, and is roughly 0.5 miles and 1,000 feet in elevation gain. This approach should take us ~1 hour. Once at the base of “Flight of the Dodo” (350m, 5.10), we will start the climb in our standard 4 pitch leading block style. Both followers will follow on separate lines, climbing simultaneously. We plan on arriving at the top of the route by 1 pm to give ourselves ample time to return to the base via double rope rappels, to the return to camp much before dark at around 6:30pm. (More info below in figures 3.1 and 3.2)
8/9/2024	Day 8	This will be a food resupply day/days. With empty packs and our machete, all three of us will hike down to our bear canister and gather food/gear for the following 8 days. Then, if we are feeling able, and if the trail was more reasonable than planned with minimal crevasse danger or dense bushwacking, we will immediately turn around and hike back in the direction of base camp with the hope of getting as far as possible on day one. More likely, we will spend the night at the boat pick-up spot, and return to base camp in the early morning. The walk will take much less time this time around since we will be more familiar with the terrain, our backpacks will be significantly lighter, and we will have established a trail through the dense forest in the first 4 miles of the approach. (See figure 1.5 for more info on the route back to the boat drop off)
8/10/2024	Day 9	This day will likely be the second half of our restock. We will wake up around 7am and hike with 5 more days of food for our final two climbing objectives in Pangea Valley. We will take it slow and enjoy our now clearly established trail back up into Pangea Valley. *If the glacier proves to be technical enough to be safer in the early morning when the snow is firm, we will hike down and back up to the base of the glacier on day 8, and hike the glacier early morning on day 9.
8/11/2024	Day 10	This day we will attempt the largest (and highest quality) climb of our trip, “Disaster Fauna” (600m, 5.11 A0). We will wake up at 5am to give ourselves ample daylight for this larger climb. The approach is .5 miles north-northwest from camp atop a snow slope and some 4th class

		<p>scrambling. To account for the snow and scrambling we are allotting ourselves an hour for the approach. Once at the base of the climb, at ~7am, we will begin the climb, splitting the five pitches each. The longest pitches are 60 meters long, so we will climb with double ropes for the rappels. We will continue using our three person climbing technique with two followers climbing on separate ropes simultaneously. We plan on reaching the top (pitch 15) before 4pm in order to give ourselves ample daylight (5 hours) to complete the 13 double rope rappels with three people. Unless everything goes perfectly to plan, this will be our last climb of the trip. If we did not lose any days due to weather or rest, we will do one smaller climb the following day.</p>
8/12/2024	Day 11	<p>We will wake up at 6am and leave camp by 7am to head due south to the base of the Extinction wall. With another short approach of roughly an hour, we plan on beginning “Lizard King” (300m, 5.10 C1) by 8am. We will again use our blocked 3-person climbing system with one leader and two simultaneously climbing followers. We will swap leads roughly thirds of the way up the climb. Once summiting the top established pitch, we will rappel the route in 4 rappels, planning on returning to camp by 5pm. Although this climb is shorter, the C1 pitch of aid climbing will likely slow us down a little. We will finish the day with general camp cleanup and packing in order to minimize time spent packing the following morning. * “Lizard King” is an unfinished route that ends halfway up the Cambrian wall. For this reason it is the lowest on our to-do list, and if we do not have time for a fourth route this will be the route we will choose not to attempt.</p>
8/13/2024	Day 12	<p>On this day we will wake up at 7 am to pack up camp, making sure we leave nothing of our own behind—following all LNT principles. We will then hike down to our stashed bear canister and the boat pick up spot. With our heavy packs full of gear, we will take this journey slow, being cautious on the steep terrain. Although our packs will be heavy, with the trail now established we are confident we can make the descent in a one day push. We will camp alongside the river by the boat pick up spot with our bear canisters for the night.</p>
8/14/2024	Day 13	<p>We will wake up early and prepare ourselves to be picked up by the jet boat, which will take us back to Kitimat in the morning, where we will shower, eat some good food in town, and reminisce on all the incredible, and difficult adventures we had had in the past two weeks. On this day, we will also find a place to give our trash can to, since we will not be able to fly back with such a large item.</p>

8/22/2024	Travel Day	After returning to Kitimat, we will stay in the region for another 8 days to enjoy our own time in the coast range post-expedition. After our 8 additional days spent in the area, we will catch our flight back to Colorado first by taking a bus to Terrace, BC. Then, we will catch a flight to Vancouver, BC with a connecting flight to Denver, and then Colorado Springs!
Total Days:	13	

Route Planning: Descriptions, Approaches, and Descents:

*All of the following information was only possible due to the incredible generosity of the 2019/2021 expedition team based out of UBC. Nick Hindley, Harlin Brandvold, and Duncan Pawson have been our close allies in preparing for this adventure, assuring us of the incredible rock quality found throughout the valley, giving us all of the information for the routes they established, and helping us assess the high glacial tongue for the approach.

Approach from boat drop-off to base camp:

At the Jet Boat drop-off location, we will camp at night and wake up at first light to begin our adventure. After consulting a few locals of the Kitimat Village, as well as the first kayak descentionists of the Giltoyees River, we know that the historic trade route in the Giltoyees Valley still exists, but is very overgrown at places. Staying on the west side of the river for almost the entirety of the journey, we will move slowly and methodically through the likely dense undergrowth in the coastal temperate rainforest. As we have learned, there will be sections of the historic grease trail that are still very defined, while other segments will prove more difficult. Due to the dense nature of the Coastal Temperate Rainforest, we have learned that a small machete is our best option for clearing a path efficiently through the dense forest. All three of us have experience with trail maintenance, and Savian specifically has experience with clearing dense bush in temperate rainforest for trail building, so we feel confident but also cautious in using a sharp tool deep in the backcountry. In order not to rush, we are likely going to take two days on this initial approach, hoping to complete just 4 miles each day. The elevation gain in the first 4 miles is only 800 feet, so despite the trail being through some dense vegetation, the trail will be relatively flat.

Once past the first 4 miles, we will mostly be above treeline and no longer need to clear forest, and at this point we will move quicker, but also on more technical terrain. For about 2 miles, we will traverse the edge of a glacial lake full of icebergs on the southern edge. After 2 miles of this, we will reach the head of the glacier. If deemed safer in the current weather conditions, we will wait to attempt the glacier until early morning, when there is the least glacial movement. We will then choose the path of least resistance that traverses across the glacier onto the northern side of the valley, where we will complete the rest of our walk through solid scree/talus. Although the talus may move slower than traversing the length of the long glacier,

with worry of crevasses, the talus minimizes our risks. We are minimizing the time we have to spend on glaciers as much as possible. Finally, after two days we will reach base camp!

*For more context to this description see figures 1.3, 1.5, 1.6, and 1.7 to see the full map of the approach, as well as the more technical part of the hike alongside the glacial lake and glacier.

Planktonic Relationship (450m, 5.8) on the Unnamed Ramp:

Approach: (0.5 Miles, 300 ft elevation gain, <1 hr)

For this approach, we will leave camp at 7am to give ourselves ample daylight for our first objective of the trip. As highlighted in our Caltopo map, we will head directly from camp across mostly solid tundra and sections of mild scree/talus before reaching a small vegetated gully that leads us to the base of a gradual leftward angling slab, which marks the beginning of the climb. This approach, even on a high snow year (like in 2021), does not have any snow patches that are necessary to cross. See more in figure 1.4 and 2.1.

Pitch Breakdown: *This climb has a lot of low fifth class and 5.6/5.8 slabs protected with bolts with the 5.8 crux low in a small, protectable runnel.

P1: Traverse leftward across the low angle slabs. This is considered an approach pitch. Fifth Class, 45m

P2: Begin climbing upward aiming for the obvious crack system angling left towards the bulge of the ramp. 5.7 40m

*See Figure 2.2 for photo context for this pitch

P3: The crux pitch: Climb through the runnel before getting kicked out to the left after protection ends. Climb a bolted face to the anchor out left. 5.8, 50m

P4-9: Climb obvious and clean low-angle bolted slabs 5.4-5.7 to the final pitch atop the ramp. Many 50-60m pitches.

*See a general overview of the location of the route in Figure 2.1

Descent: The descent rappells the route with double 60m ropes. The anchors are equipped with two stainless steel vertically offset bolts connected with webbing. We will bring our own webbing to replace the now weathered and old tat from the 2021 expedition. We will then follow the approach path back to camp. We are planning on returning by 6pm, which means beginning the 8 rappells by 2pm.

Flight of the Dodo (350m, 5.10) on the Cambrian Wall

Approach: (0.5 Miles, 1,000ft elevation gain, ~1hr)

For this climb, we will leave camp at 7am and head west and uphill aiming for just right of the Giltoyees-Ecstall Pass. Just left of what is known as the broken cliff and mosquito chimney is the base of the route. The last 300 feet or so can often have snow, so we will bring universal crampons for our approach shoes and ice axes in case they are deemed necessary. If we bring snow gear, we will carry it with us, since the rappel route does not retrace the climb, instead trending leftward towards the Giltoyees-Ecstall Pass. See figure 1.4 for a map of the approach. See figure 3.1 and 3.2 for more context on where the route begins.

Pitch Breakdown:

P1+2: Climb roughly 120m of 5.4 low angle slab. You can build a trad anchor mid way to split the 120m into two pitches. Be aware of rope drag in the low angle terrain. You will know it is the end of the pitch when you reach a nice two bolt anchor at the base of a wide splitter with large blocks visible to the left. 5.4 120m

P3: Continue climbing up the main gully, summiting a steep block (crux). 5.10b, 45m

P4: Continue on the right side of the gully before cutting left 25 meters up to the left. Finish at the base of a large pillar with a small crack system angling leftward. 5.10a, 35m

P5: Shift belay left with a small fourth class scramble. Continue angling leftward. You will reach the anchor 5 meters past a large crack that branches out of the gully straight up. 5.10a, 40m

P6: Continue climbing the right side of the large pillar, angling leftward. Belay at the top of the pillar at a 2 bolt anchor. 5.9, 25m

P7: Climb straight up in broken cracks before making a sharp right traverse 7 meters up. Continue traversing to a two bolt anchor. 5.8, 25m

P8: Climb up following splitter hand cracks and face features before angling rightward. Finish with a small slab crux before reaching the base of another crack system to the blackberry ledge. 5.8, 50m

See figures 3.1 and 3.2 for more information

Descent: With two 70m ropes, rappel from the Blackberry Ledge trending leftwards for 5 rappels. The rappel stations are two vertically offset bolts with webbing. We plan on bringing new webbing to replace the weathered tat. With these rappels, we will be cautious and descend slowly so we do not miss the next rappel station. All of the rappels are roughly 65-70 meters in length. From the base we will hike to the saddle and then make our way down the moderate tundra hillside back to camp. This descent will be .75 miles with 1,300 feet of elevation drop. To account for the less straightforward descent, we plan on beginning the rappels by the latest 2pm to give ourselves ample daylight to return to camp. If we have to bail mid route, it is possible to do so with our double ropes since there are bolted anchors on the climb as well.

Disaster Fauna (600m, 5.11 A0)

Approach: (0.5 miles, 500 feet elevation gain, ~1hr)

For this climb, we will head north from camp, leaving at ~6am, since this is the largest and most technically demanding climb of our trip. We will head almost directly towards the base of the climb, which may have a small snowfield guarding the base if the snowpack from the year is a large one. If needed, we will have our crampons and ice axes, which we can then leave at the base of the climb to grab upon our return to the base post-rappells. After the potential 100 meter snow field, we will climb ~200 meters of fourth class before reaching the base of the climb. This first pitch will be easily identified as the end of vegetation, and a small roof as pictured in figure 4.3. For more context on the approach see figure 1.4

Pitch Breakdown

P1: Climb through a small roof and climb past two small discontinuous cracks. 5.10, 3 bolts, 35m

P2: Climb through a thin crack with 3 bolts into a right angling flake into a further right angling crack with two more bolts. 5.7, 5 bolts, 40m

P3: Traverse left on the face underneath a large left angling corner. 5.10-, 4 bolts, 20m.

P4: Climb upward on the face before cutting right into a left facing corner with 3 bolts on the face and then one bolt on the right face as the corner turns into a dihedral. Belay at the top of dihedral. 5.9, 4 bolts, 35m

P5: Continue climbing up the dihedral past a bolt until it turns into an unprotectable left facing corner. Here, cut right onto the face and follow 5 bolts through a slab crux to access a splitter hand crack. Climb this crack to a hanging belay. 5.11-, 6 bolts, 55m

P6: From the belay, traverse left onto the face to access a small right facing corner. When this corner ends, cut back left onto the short unprotected slab to the belay. 5.11-, 10m

P7: Continue upwards on the slab past three bolts before reaching a small corner with protection. Past this corner, climb into a 3 bolt A0 section that has yet to be free climbed. It likely goes free at mid 5.12 slab. Above, climb a splitter .5-.75 crack to the anchor on the face above. 5.11- A0/5.12 free?, 7 bolts, 35m

P8: Climb up a left facing corner up and left of the anchor. This turns into a stemming corner with 4 bolts that finishes before the roof cuts right and turns into an overhang. 5.10+, 6 bolts, 45m

P9: Climb slabs and discontinuous cracks up and left past two bolts. Reach a right facing roof, and trend left to cracks. Follow cracks up to a right facing arching roof, then a right angling runnel to the anchor. 5.10-, 2 bolts, 50m.

P10: Climb up past one bolt on the slab and then trend right across this slab to a low angle corner. At this point, the more broken and ledgy terrain begins. 5.8, 1 bolt, 45m

P11: Climb in parallel cracks onto a face. Follow this face into a groove with small protection. Above, angle rightward across ledges onto a vegetated ledge. 5.9, 60m

P12: Continue up the slab before traversing left across a discontinuous right facing crack. Keep trending left on the slab to an arete with a bolt for supplemental protection. Continue up the face to a small perch belay. 5.9, 50m

P13: Continue climbing up large ledges to a short vegetated splitter. Continue up low angle terrain left of some large pillars to your right. 5.10-, 50m

P14: Ascend a small right leaning finger crack onto a small left trending ledge. Cut right onto another right leaning ledge to a small pinnacle. Belay just above and right of this small pinnacle. 5.8, 35m

P15: Climb the last low angle slab to the top! 5.5, 40m

*For more detailed info see figure 4.2

Descent: For this climb, you rappel the route with double ropes. Double 70s are needed if you wish to combine pitch 5 and 6. Rappel to every belay station otherwise, except for the pitch 2 anchor. In total we plan on using 70 meter double ropes, and we will rappel in 13 rappels back to the base, where we will pick up our snow gear before descending back to camp the way we approached.

Lizard King (300m, 5.10 C1)

Approach: (0.5 miles, 500 feet elevation gain, ~1hr)

For this climb, we will head south of camp, traversing the same elevation gradient of camp before beginning our climb up to the base Lizard King, which stands above some 3rd class slabs. On a high snow year, these slabs may be partially covered in snow, so we will bring our crampons and ice axes in case they are necessary. We will then be able to leave this gear at the base of the climb because the descent rappels the route.

Pitch Breakdown: *This climb has not been completed to the summit. The FA team had to bail due to wetness in the middle of the face. For this reason, this is a last addition to our agenda, and we will only attempt the climb up to the previous team's highpoint if we find ourselves with

extra time and good weather. Additionally, if the climb seems to be similarly wet in the middle, we will not attempt the upper established pitches.

P1: Climb up a low angle crack into a small left facing corner. When this corner turns left and becomes a roof, climb through the roof onto the face. Belay at a two bolt anchor. 5.8, 40m

P2: Climb up and left on the low angle slab. Belay at an anchor in the middle of this slab. 5.7, 35m

P3: Continue up and left on this slab until you are able to mount a large horizontal ledge. Belay at the far left part of this large ledge at the base of a wide crack. 5.10b, 35m

P4: Climb upward in the obvious wide crack system with a dyke. This pitch is often wet. 5.8, 45m

P5: Continue straight up this wide crack feature. Sometimes you will be climbing inside the wide crack with protection in the back. At other moments you will be climbing outside of the wide crack with bolts for protection. 5.8, 30m

P6: Climb up under the large roof on the left side of the chimney. Get ready to get showered on by the water above! 5.7 30m

P7: Climb out and through the wet roof using aid climbing techniques. Nothing smaller than a black totem is needed for this pitch. Belay at a hanging belay. C1, 25m

P8: Climb up the now vertical and damp crack to a roof up and to the left of the main crack feature. You will see 4 bolts for a portaledge. Rappel back to the ground from here. 5.10-, 40m

*For more information on the climb see figures 6.1 and 6.2

Descent:

From the top of pitch 8, to pitch 6, to pitch 4, to pitch 3, to the ground, descend in four rappels with double 70 meter ropes. All of the anchors are equipped with the vertically offset bolts with webbing connecting them. We will bring new webbing to replace the old and weathered tat from 2019. From the base, we will collect the gear we left and return to base camp the way we came.

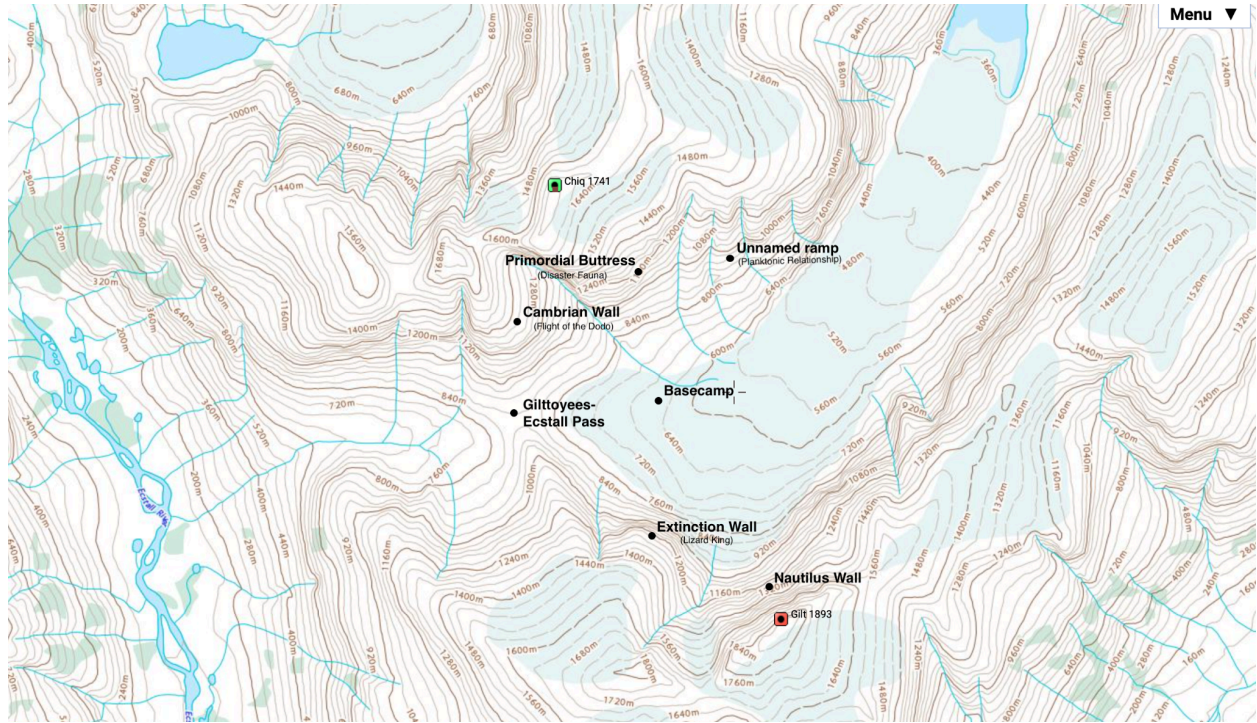


Figure 1.1: General Overview of the Pangea Valley

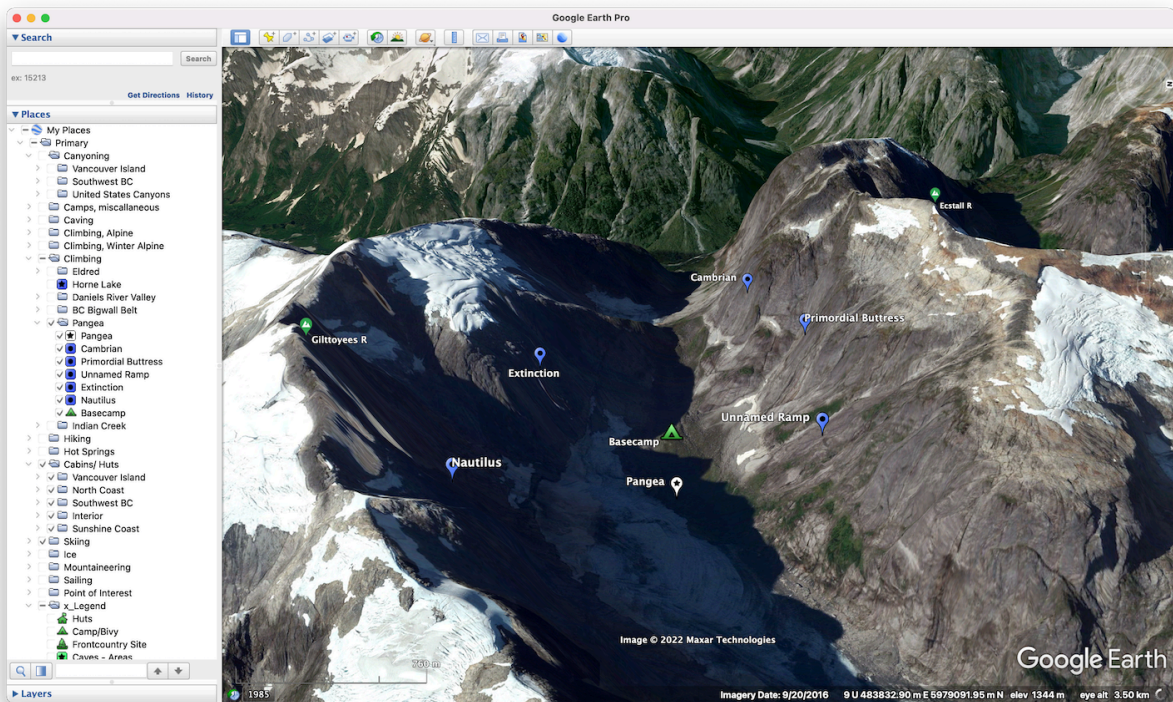


Figure 1.2: General Google Earth Overview of Pangea Valley



Figure 1.3: General google earth overview with approaches to each wall/climb labeled with orange lines, as well as the second half of the glacier traverse highlighted in purple

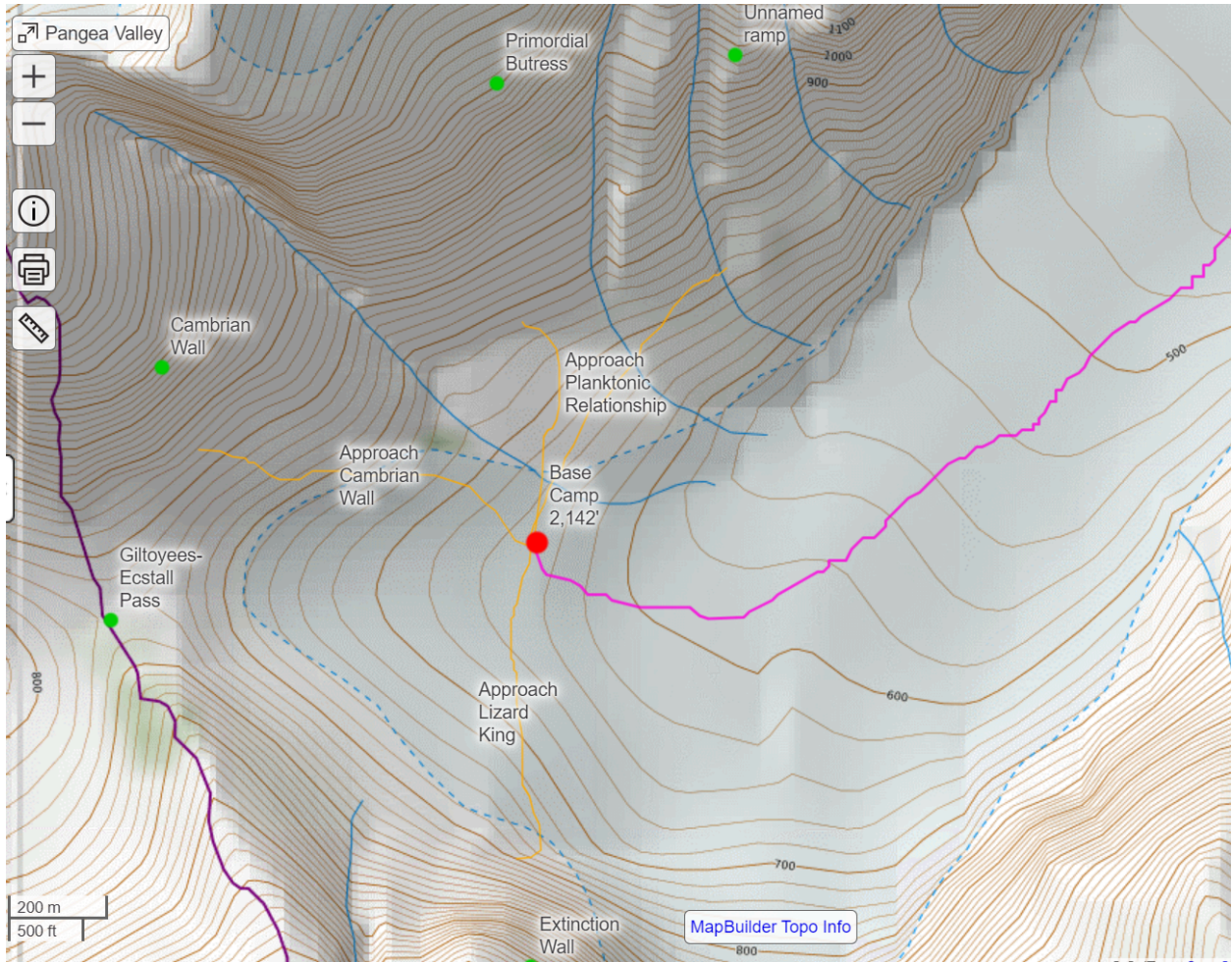


Figure 1.4: A topographic map of the approaches for each objective



Figure 1.5: A screenshot of our caltopo map, highlighting the boat ride and approach to Pangea Valley

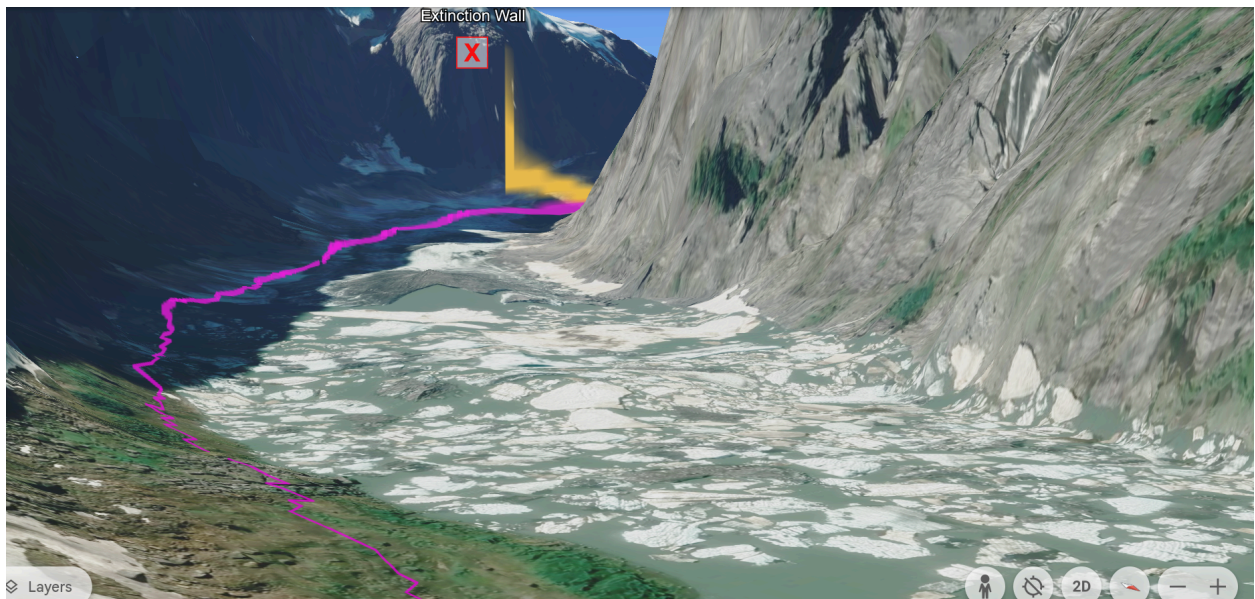


Figure 1.6: The initial approach, skirting the southern edge of the glacial lake to access the main glacier. Base camp is just out of view behind the cliff to the right of the Extinction Wall

Foch-Gilttoeyes Provincial Park

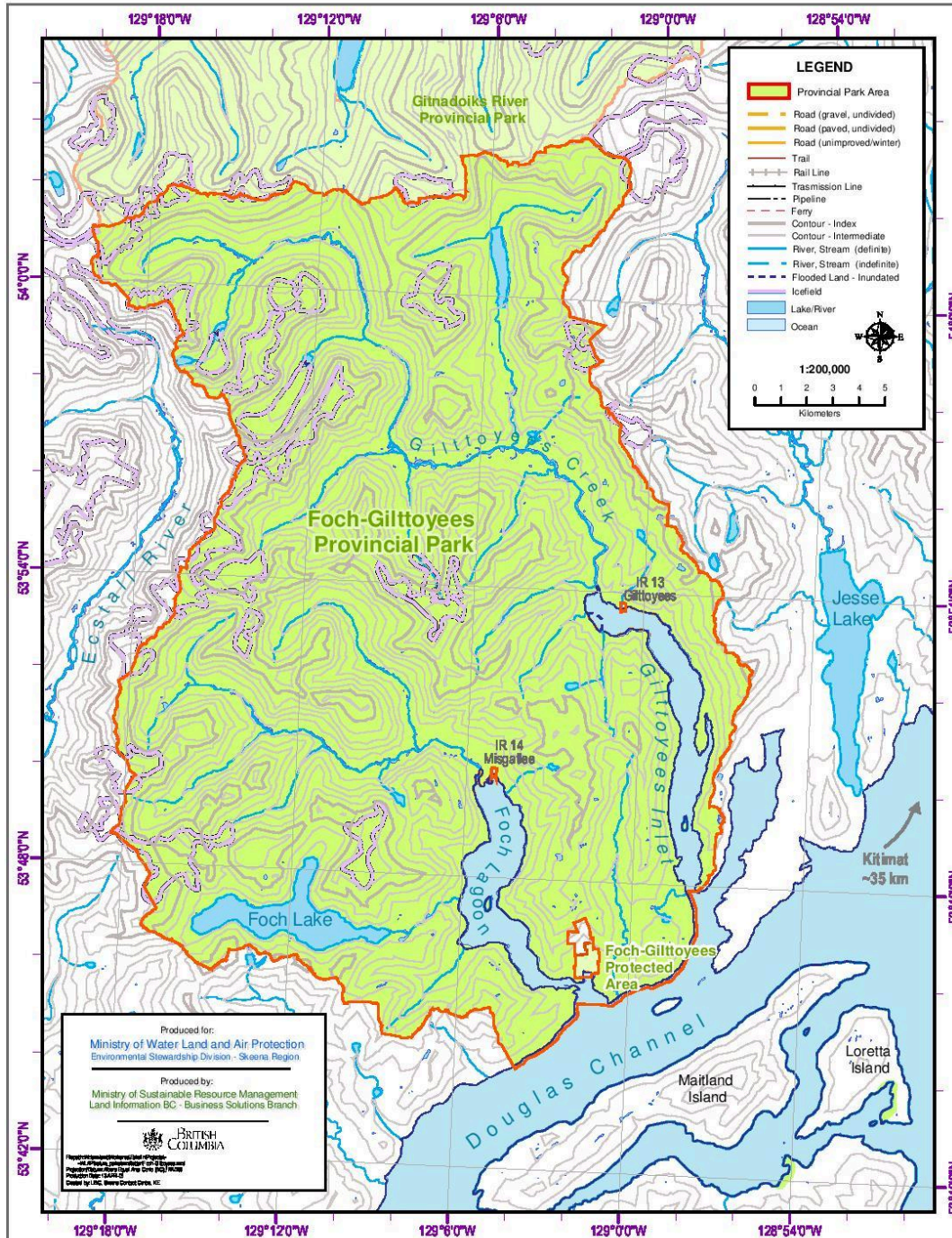


Figure 1.7: A map of the Foch-Gilttoeyes Provincial Park Area with the remote cabin noted as “IR 13 Gilttoeyes”



Figure 2.1: Planktonic Relationship (450m, 5.8)



Figure 2.2: The beginning of pitch 1 of Planktonic Relationship



Figure 3.1: Flight of the Dodo (350m, 5.10) on the Cambrian Wall

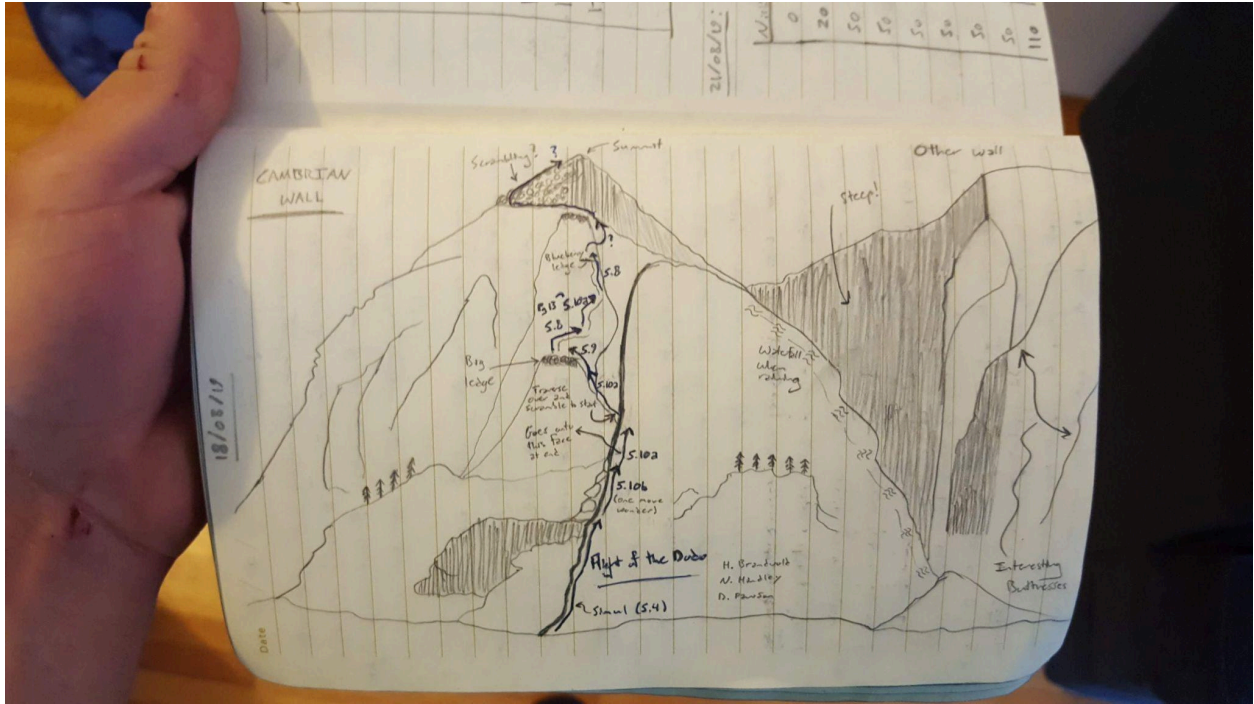


Figure 3.2: Hand drawn topo for Flight of the Dodo



Figure 4.1: Disaster Fauna (600m, 5.11 A0) on the Primordial Buttress

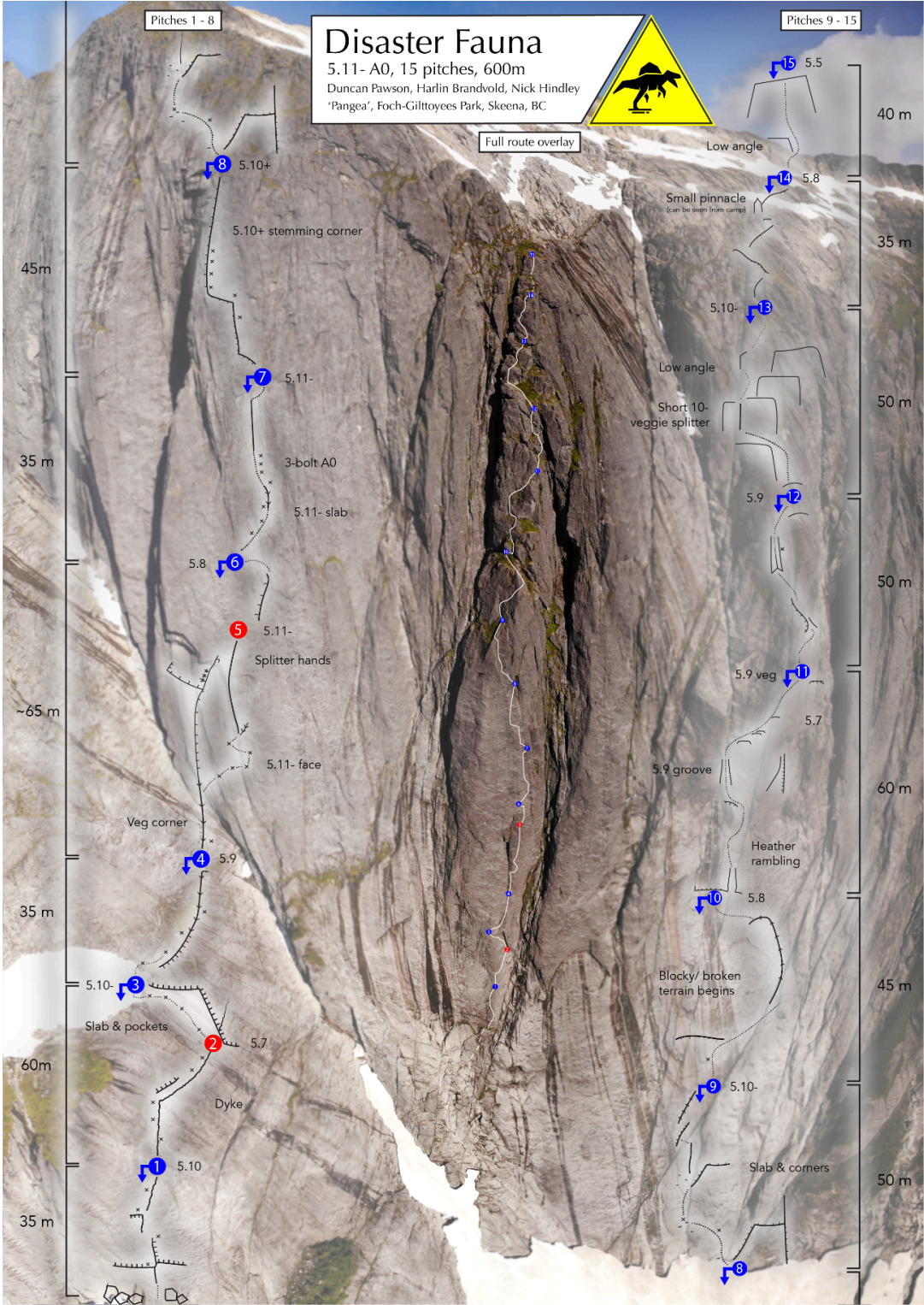


Figure 4.2: Topo of Disaster Fauna on the Primordial Buttress



Figure 4.3: The start of pitch one on Disaster Fauna



Figure 5.1: From left to right, Flight of the Dodo, Disaster Fauna, and Planktonic Relationship as seen from the base camp



Figure 6.1: Lizard King (300m, 5.10 C1) *unfinished route

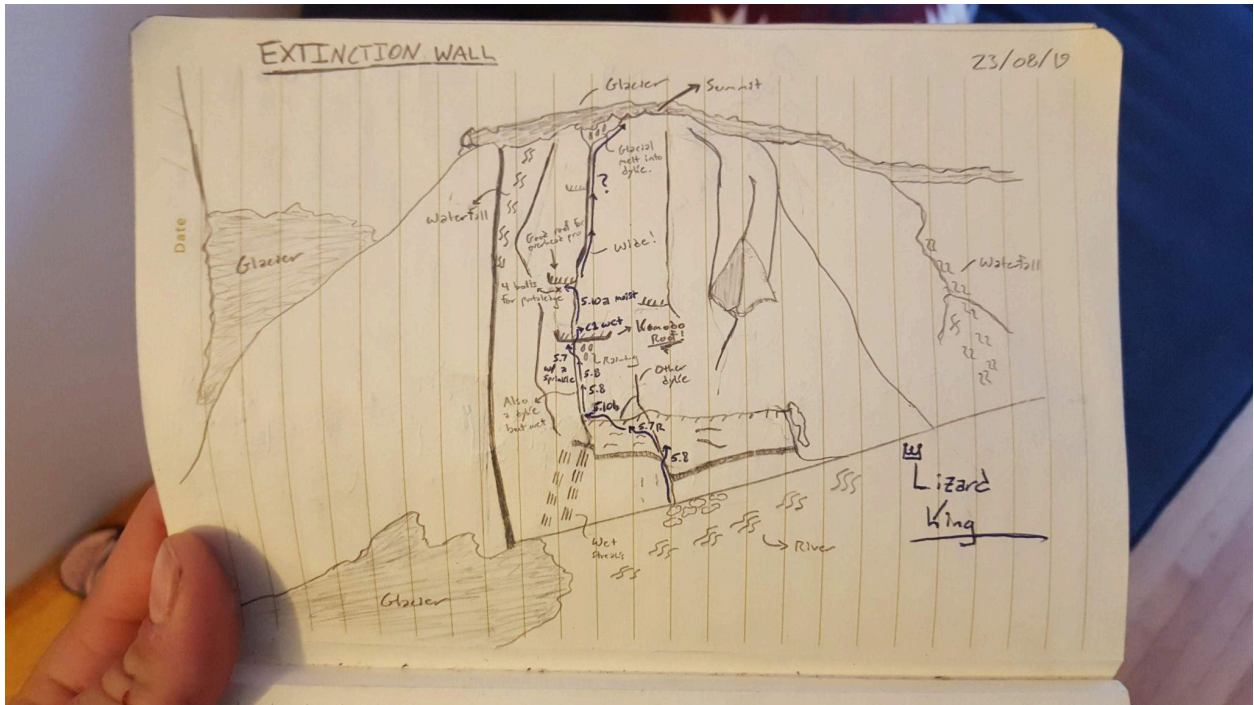


Figure 6.2: Hand drawn topo of Lizard King with the unfinished section labeled with a question mark

Equipment List:

Camping Gear:	Cooking Gear:	Climbing Gear:	Clothing (per person):	First Aid Kit:
1x Hilleberg 3 Person Tent	2x Pocket Rocket Stove	2x 70 meter 8.9 mm ropes	5x Underwear	Duct Tape
3x 0-15 Degree Sleeping Bags	Steel wool	3x harnesses	2-3x Synthetic T-Shirts	6x Adhesive Bandages
3x Sleeping Pads	4x lighters	3x chalk bags	3-4x Wool Socks	6x gauze
1x Binoculars	MSR Dromedary 6 liter	3x comfort climbing shoes	Camp Shoes	Medical Kit Bag
2x Trash in Strap	1x Large tarp	3x technical climbing shoes	Long Underwear	6x Alcohol pads
3x 80+ liter pack	3x knife	3x helmet	Fleece pants	WFR field guide
3x Headlamp	10x MSR fuel bottles	3x Petzl Hollowblock 2	Fleece jacket	Acetaminophen (30 pills)
12x AAA Batteries	Biodegradable soap	3x Petzl GriGri	Softshell pants	Ibuprofen (30 pills)
3x Sunglasses	4x Trash Bags	1x 20L day pack	Softshell jacket	SAM splint
4x Water bottle (1 liter)	6x gallon ziplock bags	10x locking carabiners	Gaiters	3x Mole skin
3x Toiletries	Medium sized pot	10x non-locking carabiners	Rainpants	Trauma Shears
3x Bowl	sponge	4x 5 meter webbing	Mountaineering Boots	60cc syringe
3x eating utensil	spoon	4x quadruple length slings	Beanie (warm hat)	tweezers
3x 12 oz Sunscreen	spatula	4x double length slings	Down Puffy	6x gloves
3x Lip Balm (spf 15)		3x micro traxions	Raincoat	
Heavy Duty Trash Can		8x quicklinks		

Topography Maps		3x nut tools		
Compass		30x alpine draws		
Somewear Hotspot Emergency Device		3x rack of cams (.1-5 BD C4 sizes)		
4x toilet paper roll		1x set of stoppers		
3x Bear Spray		4x Climbing tape roll		
5x Aquamira Purification		6x Crampons		
4x 27 Gallon Hemp sac odor proof plastic bags		3x ice axes		
1x 14" Condor Machete				

Food List:***Calculated for three students. Budget not including Ben is labeled at the bottom.**

Number of People	Days in Field	Food Days	PPPPD	Total Pounds
3	13	39	1.53	59.75

Category	Multiplier	People	Days	Approx Weight (lbs)
Breakfast	0.26	3	13	15.78
Lunch	0.29	3	13	17.34
Dinner	0.2	3	13	11.99
Miscellaneous	0.25	3	13	14.64
Total				59.75 lbs

Breakfast Food	Cost per unit	Quantity	Amount (oz)	Total
Instant Oatmeal	\$5.99 (15.1oz)	4	60.4	\$23.96
Granola	\$7.49 (24.1oz)	4	96.4	\$29.96
Powdered Milk	\$9.99 (25.6oz)	1	25.6	\$9.99
Cranberries	\$4.49 (4oz)	3	12	\$13.47
Brown Sugar	\$4.99 (24oz)	1	24	\$4.99
Pecans	\$13.99 (16oz)	1	16	\$13.99
OvaEasy Eggs	\$10.89 (4.5oz)	4	18	\$43.56
Total:			252.4oz	\$139.92

Lunch Food	Cost per unit	Quantity	Amount (oz)	Total
Clif Bars	\$1.99 (2.4oz)	20	48	\$39.80
Larabars	\$2.39 (1.7oz)	9	15.3	\$21.51

ProBars	\$3.29 (3oz)	9	27	\$29.61
Dried Mango	\$10.99 (8oz)	3	24	\$32.97
Peanut Butter	\$6.99 (16oz)	2	32	\$13.98
Jelly	\$6.49 (13oz)	1	13	\$6.49
Bread	\$7.99 (27oz)	1	27	\$7.99
Peanuts	\$4.99 (16oz)	1	16	\$4.99
Raisins	\$4.49 (12oz)	1	12	\$4.49
M&M's	\$8.99 (19.2oz)	1	19.2	\$8.99
Cashews	\$9.99 (16oz)	1	16	\$9.99
Sunflower Nuts	\$2.99 (8oz)	2	16	\$5.98
Banana Chips	\$4.99 (6oz)	2	12	\$9.98
Total:			277.5oz	\$196.77

Dinner Food (39 Meals of Mountain House)	Cost Per Unit	Quantity	Amount (oz)	Total
Beef Stroganoff	\$13 (4.8oz)	10	48	\$130
Beef Stew	\$13 (4.94oz)	10	49.4	\$130
Chicken and Rice	\$13 (4.94oz)	10	49.4	\$130
Chicken Dumplings	\$10.25 (4.5oz)	9	45	\$92.25
Total:			191.8oz	\$482.25

Miscellaneous	Cost per Unit	Quantity	Amount (oz)	Total
Hot Cocoa Mix	\$3.49 (11.04oz)	3	33.12	\$10.47
Tea	\$3.69 (1.2oz)	3	3.6	\$11.07
Spices	Varying prices ~	5	11.5	\$15

	\$3 (2.3oz)			
Brownie Mix	\$3.99 (18oz)	1	18	\$3.99
Oreo Cookies	\$5.99 (19.1oz)	2	38.2	\$11.98
Tates Cookie	\$5.99 (7oz)	4	28	\$23.96
Frosting	\$2.79 (16oz)	1	16	\$2.79
Chocolate	\$3.49 (7oz)	3	21	\$10.47
Couscous reserves	\$3.29 (4.7oz)	7	32.9	\$23.03
Coconut Oil reserves	\$16 (16oz)	2	32	\$32
Total:			234.32oz	\$144.76

Food Total:			956.02oz	\$963.70
Food Total for Savian and Wiley:				\$642.47

Total Budget:
(for Savian and Wiley)

Transportation:	Flight: CO Springs to Terrace	Bus Ride: Terrace to Kitimat	Jet Boat drop-off	Jet Boat Pick Up		
Savian Czerny	\$1,200	\$2	\$650 (all)	\$650 (all)		
Wiley Holbrooke	\$1,200	\$2				
					Total:	\$3,704
Food:	Pounds per person per day	Cost PPPD	Total pounds of food (for Wiley and Savian)			
	1.53	\$25.71	39.83			
					Total:	\$642.47
Fuel:	Amount:	Cost /unit				
Butane	10	\$6.95				
					Total:	\$69.50
Maps and Books:	none					
Gear Rental:	none					
Miscellaneous:	Amount	Cost / Unit	Sub total			
Bear Spray	2	\$54.95	\$109.90			
Aquamira	5	\$16.98	\$84.90			
					Total:	\$194.80
Permits and Fees:	None					

Carbon Emissions Offsetting	Carbon Footprint	Cost to offset				
	2.98 Metric Tons	\$14.89			Total:	\$14.89
					Trip Total:	\$4,625.66