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

<u>Relevant Experience of Team Members</u>
- ☐ 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

<u>Risk Management Plan</u>
- ☐ 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? _____

Ritt Kellogg Memorial Fund

Registration

Registration No. W1JG-9YGP
Submitted Jan 22, 2025 10:54am by Camden Burke

Registration

Aug 26, 2024-Jan 22, 2025

Ritt Kellogg Memorial Fund
RKMF Expedition Grant (2025 Group Application)
Event Aug 26, 2024-Jan 22, 2025
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 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 Kate Nelson at knelson@coloradocollege.edu

Waiting for Approval Jan 22, 2025 10:54am

Participant

Camden Burke
[redacted]

Consent

Camden Burke
Resort Ski Leader

Participant Agreement: Behavior and Expectations
Recorded (Jan 22, 2025 10:54am, *CB*)

Expedition Summary

What is the name of your proposed expedition?

Bugaboo Baddies: Climbing in the Canadian Rockies

Briefly describe the objectives of your expedition.

The main objective of our trip is to have an expedition into an unknown territory, to us, and

experience the wilderness that comes with it. Following Ritt's steps, we hope to appreciate the land we walk on and seek adventure within that land. We aim to further our knowledge of the alpine, as well as push our boundaries of what we think is possible for ourselves. While executing our expedition, we strive to do so in a leave-no-trace (LNT) style. This is possible through our style of climbing (trad climbing) but also by the fact that we will pack out more than we bring in. We do have specific climbing objectives (routes listed below), however, the end goal is a safe expedition that we learn exponentially from.

Kain Route (South ridge), Bugaboo Spire
Northeast Ridge of Bugaboo Spire
Paddle Flake Direct, Crescent Spire
Beckey-Chouinard Route, South Howser Tower
West Ridge of Pigeon Spire

Briefly describe the location of the expedition.

The Bugaboos, also known as the Bugaboo Provincial Park, is located within the Purcell range in Canada. In this range in Canada, lies some of the most spectacular granite spires in North America. Climbers wildly consider the area we are specifically going to as the “bugs,” which is in the cirque of Bugaboo Spire. We will also be traveling to the nearby Howser towers for some routes. The Howser Towers are a good example of the wild nature of the bugs, as they reach over 11,000 ft in elevation, and are further away from the Applebee campsite. However, despite their wild and intimidating nature, the quality of the rock is fantastic, allowing for safe and reliable placements and anchors.

Date that travel to the expedition will start.

Jul 20, 2025

Date that your team will enter the field.

Jul 22, 2025

Date that your team will exit the field.

~~Feb 6, 2025~~ AUG 6, 20026

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

Aug 8, 2025

How many days will your team be in the backcountry?

14

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

The Bugaboos is a continuation of the northwestern extreme of the Purcells in the Columbia Mountains, in the southeast of the province. The area of the Bugaboos is considered a true backcountry alpine environment. Neither of us has been the British Columbia, allowing for a further feeling of adventure and unknowing. The bugs, although semi-close to a trailhead, is far away from the nearest town. So we know that this area provides the opportunity for a true wilderness experience and solitude. Both Robbie and Cam plan to push themselves physically, relying on years of built-up experience and conditioning. We have done this by choosing relatively moderate climbing routes, but some that challenge us greatly. The climbing routes require efficiency and physical fortitude, as they are long objectives with large amounts of elevation gain and loss. To accomplish these objectives, we must work together, relying on each other and ourselves. On the wall, we will have just each other to rely on, offering a chance for a deep partner understanding and relationship to grow. Robbie and Cam have had a lot of time together, and plan

on being roommates in the upcoming semester. Nothing we test our partnership more than this trip into the wilderness.

Participant Qualifications

Expedition team member information

Robbie Repenning: May 2026, WFR expires January 15, 2027
Camden Burke: May 2026, WFR recertification April 26-27th 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.

Robbie and Cam are both very active within the outdoors. We both recreate regularly in the surrounding Colorado Springs area, as well as Colorado as a whole. Throughout the upcoming semester, both Robbie and Cam plan to spend a large number of days ski-touring and climbing together. We have a long history of climbing together, as Robbie caught Cam's first trad fall freshman year. Cam took Robbie on his first Eldorado Canyon climb, resulting in many trips back to the canyon. Ski touring will be vital for cardio strength and it will also help with altitude training. We will also both try to spend at least 5 days at 10,000 in the 2 weeks before the expedition. When the temperatures and conditions allow, we also plan on climbing as much as possible together. We plan on climbing routes similar to those in the Bugaboos. These routes would include:

Cirque traverse, 5.9, 20 pitches, Cirque of the towers
20 Pitches in a day of 5.9/5.10 at Turkey Rocks
22 pitches in a day, in Eldorado Canyon for Cam's 22nd Bday
Handcracker, 5.10a, 5 pitches, in Eldorado Canyon
Vertigo, 5.11a, 4 pitches, in Eldorado Canyon
The Barb, 5.10, 9 pitches, in Rocky Mountain National Park
Casual Route, 5.10a, 7 pitches, RMNP
Revelation route, 5.11b, 7 pitches, South Platt
Culp Bossier, 5.8+, 8 pitches, in RMNP
The South Face of the Petit Grepon, 5.8, 8 pitches, RMNP

Both Robbie and Cam hope to attempt the Naked Edge this summer, a notorious 5.11- route in Eldorado Canyon. To get to this point, we plan on climbing a lot in a multi-pitch and single-pitch environment before the alpine is open. We both have onsighted multiple 5.10c/d or 5.10+ trad routes. We hope to up this baseline to 5.11-. Throughout the semester and summer, we plan on climbing, running, and scrambling as much as possible. This expedition is one of our main priorities for the summer, and we plan on putting all of our available effort into preparing and executing it.

Our main objective for the trip is the Becky-Chouinard route. Here are some specifics on how we will be training for the route:

Cardio: We will be touring extensively during this upcoming semester, settling the baseline for long slow days in the alpine. Although it is not specifically the same activity, this baseline will help extraordinarily with our overall fitness and ability to carry packs for miles on end, while simultaneously doing an activity that requires precision and attention. When the snow starts to melt, we will transition to running. Trail running is a fantastic way to build our base for endurance, and long days on foot. The flatirons, in Boulder CO, will be our main training ground for this. The

flatirons combine trail running with scrambling, allowing us to sharpen our scrambling skills with no ropes, as well as getting a feel for moving quickly and efficiently through the mountains. There are a lot of formations close together, so we can continue pushing the run if we are feeling good, or shut it down early. Another just trail running objective that will be good training for the extensive elevation gain we will encounter in the bugs will be the skyline traverse. This is a 5000′ ft 17-mile trail run above Boulder that we can do throughout the summer, comparing times, and making sure we are improving as the summer goes on.

Strength: We will both be climbing a lot in a single-pitch environment, trying to build our individual climbing grade higher. Robbie will have a membership at SCC, a local bouldering gym in Colorado Springs that will allow him to build strength in a focused environment. Camden will either sport climb/single pitch trad climb near/at limit, or obtain a membership to the Spot Louisville, a local climbing gym in Boulder. Both will be good training grounds for the same focused training on strength. Although we are attempting routes decently below our sport climbing onsight grade, it will be vital to have the strength to pull difficult moves one after another. This is where endurance comes in. Gyms and single-pitch environments will be important to specifically train lots of pitches in a row. Both of us will either do lots of laps on the auto belay or do multiple single pitches in a row. This will create the environment of the multitude of pitches in the bugaboos. Once turkey rocks is dried, we plan on trying to get in as many 5.9/5.10 pitches as possible. This is a great simulation for physical, sustained granite crack climbing. This also ties in with another important point, as it will help get our systems dialed before heading into the park.

Blue collar days: We will be attempting routes similar to it in RMNP as soon as possible. Routes such as the Barb and the Casual route. Climbing new routes that are challenging both physically and mentally, as well as at a higher altitude, will prepare us well for BC. All of the routes listed in RMNP require long days of “blue collar work” consisting of what we expect to find in the Bugs: Long, steep approaches. Higher elevation climbing. Difficult climbing with large amounts of exposure. Complex route finding on unfamiliar terrain. Complex descents, requiring rappels possibly in the dark, and long approaches back to camp. Chimneys and tough, non-straightforward climbing. The best way to gain blue-collar fitness is to go do blue-collar work. This will be the best training there is for alpine climbing, as there is no better way to train long days with packs than long days with packs.

Systems efficiency: We will need to make sure our systems are dialed for maximum efficiency in the mountains. The training for this will mostly be done through looking through online forums, such as Tyler Karows's Website, which has a fantastic collection of blog posts from himself and other climbers describing efficient new-wave techniques for modern alpine climbing. We will then put those systems to use in Eldorado Canyon, which contains long enough to see what systems work and what don't while providing a safe and known environment close to emergency resources.

We believe that Becky-Chouinard is within our reach at our current level of climbing and experience, but we strive to be as prepared as possible. For the past 2 years, Robbie and Cam have spent countless hours together, learning new techniques and new sports altogether. We both picked up ice climbing last year, and Robbie now leads WI4 confidently, and Cam WI3. We have gone methodically through the sport, learning how it is similar and different to rock climbing, and how to be as safe as possible. Soon, both of us will be AIARE 2 certified, showing our extensive knowledge of the backcountry and decision-making. (Robbie’s block break plans for block 5 is AIARE 2) We have both climbed in settings similar to the bugs. Cam in RMNP and the Cirque of the Towers. Robbie in the Wind River Range as well. Our cardio fitness level is high already, as we did the Commando ski run, a 13-mile ski traverse at a casual pace in 5 hours.

Camden and Robbie are planning on taking a glacier rescue course, as well as a rock rescue course through the RKMF education grant. Both will be taught by Pikes Peak Alpine School. We feel as though rock rescue is more important than a glacier rescue course, as the glacier travel is not overly complex, and we are much more likely to run into a problem on rock than on the glaciers. This doesn't mean we aren't thinking about glacial travel, just prioritizing our risks. Camden has traveled over technical glaciers before in the Wind River Range when climbing Gannett Peak. He set up deadmans, and prusiks, and directed his family over bergschrunds, both ascending and descending.

Expedition Logistics, Equipment, and Food

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

Both Robbie and Cam will be in Colorado, so travel will be very straightforward. Robbie will drive up to Boulder the night before departure. We will take one car to the Conrad Kain Hut Trailhead. When leaving the field, we will take the same car back to Boulder. From Boulder, Robbie will drive back to Colorado Springs to continue research.

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

Route Descriptions .pdf (11MB)
Uploaded 1/22/2025 10:38am by Camden Burke

Please paste a URL to your complete digital expedition map.

https://webmap.onxmaps.com/backcountry/share/content?share_id=01JJ6DDXWDGXHZVHBHSKNJ177F

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

During (roughly) day 8, we plan to re-ration. Our extra food and supplies will be kept in the car during the first part of our expedition. We will both hike down with our large backpacking backpacks with nothing in them besides a med kit, small snacks, and water. Once we arrive at the car, we will load up with the new supplies, and any extra climbing gear we may have lost, broken, or need replacement. We will hike back up to Applebee campsite slowly, as these will be large packs. Taking appropriate rest during the hike, as well as after will be important. Although not long, this will be a different type of strenuous day. We will most likely take a full day off after this resupply day.

Describe how you will protect your food from wildlife.

It is not required to use bear canisters in the Bugaboos. At the campsite, there are poles/racks for hanging sacks and metal boxes. If a bear is trying to get food or near camp, we must use bear spray as that creates bad habits for the bears. Cam worked in Lake Clark National Park, Alaska, the past two summers as a bear guide and knows the right practices if there is a bear near camp or food. Rodents are also a large concern in the Bugaboos, which is why we will make sure to always hang or store our food.

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

Bugs Gear list.pdf (173KB)
Uploaded 1/22/2025 10:40am by Camden Burke

Upload a thorough equipment list.

Bugs Gear list.pdf (173KB)
Uploaded 1/22/2025 10:40am by Camden Burke

Upload a first aid kit list.

Bugs Gear list.pdf (173KB)
Uploaded 1/22/2025 10:41am by Camden Burke

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

Trad climbing is a style of climbing that leaves no trace. When people first started climbing in the Bugaboos, they would use things like pitons or leave tact behind to get off of routes. Now we have the tools necessary for clean ascents of every climb listed on this proposal. There are already enough tact and bolts and pitons to use on each climb that we should not have to leave anything. We will strive to not leave a singular piece of gear behind the whole trip. That would be impossible if we get caught halfway up a wall and a storm comes in. We have to start leaving gear to get down safely. However, if possible, we will go back up to retrieve the gear on a nicer day. By climbing in this style, we are following LNT principles, as well as being true to our own ethics of climbing. This style is based on American climbing culture and we want to continue that. We will also be on the indigenous land of the Ktunaxa, Shuswap, and Sinixt Nations, and others who share this beautiful place. We acknowledge that we have grown up extremely privileged to have the access and knowledge to be able to go out on an expedition like this.

Continuing with LNT principles, we will be packing out all of our own waste. (plastics from food containers.) We will not be packing out our poop as there are bathrooms at the Applebees campsite, as well as the Howser towers. Peeing is something that affects the surrounding area. We will always try to pee at least 250′ away from any sort of water source, and 100′ away from any sort of trail. We will also make sure to camp on durable surfaces, not adding to any erosion already taking place. This goes for trails to climbs as well. Finding the path that has been taken the most is important so there are not lots of different trails all leading to the same place. In terms of emissions, we will be asking for $17 to help offset our air travel and driving travel.

Risk Management

What are the main objective hazards of the expedition?

Ourselves: The more time one spends in the backcountry, the more you realize your decision-making is the difference between a successful mission or an epic. With an activity like climbing, especially alpine climbing, it is important to remember it is an inherently dangerous activity. One of the main reasons that there are fatalities/accidents in alpine climbing is due to poor decision-making. Whether it is a failure to double-check a knot, not tying stopper knots at the end of a rappel line, or causing rockfall on a partner, all of these things can be fatal. It is of the utmost importance that we stay vigilant, and possibly more important, communicate well between ourselves. Both of us will make sure to talk through every decision, making sure any differences are resolved into a plan or action we both agree on. This is vital in a 2 person partnership. Rappelling itself is where most climbing accidents occur. At each anchor station, both on the way up and way down, we will be double-checking each other's knots, ropes, and systems to ensure that we are safely tied in. For our anchors we will follow ERNEST, equalized, redundant, no extension, strong, and timely. We will aspire to have at least a 25 kn possible load on each anchor, which usually means three good to great(bomber) pieces. We will be using a UIAA-certified dry-treated rope at all times, making sure every day that the rope has no soft spots and is in good condition. Throughout each climb, we will give each other attentive and responsive belays, doing our best to have the right amount of slake. Ensuring the leader has a soft catch when there are no obstacles, or a tight belay when there are obstacles like ledges in the path of falling. Running it out is sometimes necessary when in the Alpine, so we must ensure that we are well within our climbing ability when doing so, always putting in a piece at least every 10 vertical feet if possible.

Rockfall: This is one of the main dangers while climbing. Rockfall is very real and very dangerous. It can happen without even touching the rock. Because the Bugaboos is an alpine environment, water, and ice can get into cracks. When water gets into cracks and freezes, it expands, pushing outwards with a force strong enough to break apart rocks. When that ice pushes the rock past that point of no longer being attached to the side of the cliff, the sunlight starts to melt the ice. Nothing is holding onto the rock. This is what creates rockfall without even being remotely close to it. When traveling close to the base of areas where rockfall is possible, we will be wearing helmets. When we are climbing, we will also be wearing helmets 100% of the time. If the leader notices rockfall, they will scream at the top of their lungs “ROCK” so the partner below is aware of what is happening. The leader could also dislodge a rock themselves. If possible, put the rock back in place. If not, once again shouting “ROCK” is vital. If we come across a large rock ready to fall off, we will make sure there is nobody near the ground and trundle the rock. This is only if we are 110% sure there is nobody near the ground as rock debris can shatter and split into lots of small projectiles. This ensures that other climbing parties will not dislodge the rock unexpectedly, possibly injuring someone. To mitigate this we will be making sure to pull down, not out on rocks. Also make sure to be careful with which rocks we pull on, especially in loose terrain.
The bugaboos can get crowded, especially in August, so it will be vital to be vigilant about other parties as well. We will need to make sure that we are not pulling rocks down on other parties, and being aware of parties above us. -

Wildlife: Bears are our main concern for wildlife when traveling in the Purcell Mountains. While there are some brown bears, our main concern is black bears. Keeping to LNT principles is vital when in bear country. (Plan Ahead and Prepare. Travel and Camp on Durable Surfaces. Dispose of Waste Properly. Leave What You Find. Minimize Campfire Impacts. Respect Wildlife. Be Considerate of Other Visitors) We will not be having any open fires. We will only take out what we need from bear canisters, and use bear canisters always. Black and brown bears have incredible noses and are very curious creatures. They are attracted to any non-natural scent, whether that is bacon or body odor. Unless they have eaten it before, they will not know it is food. The canisters are not hiding any scent from the bears, however, it is so they cannot get to the food. In the high alpine, they are smaller because there is less food to go around. However, this means they can be more aggressive when it comes to food. Bears mustn't get into food. Camden has had to spray brown bears before and has a lot of experience dealing with large brown bears and black bears in Alaska. If needed, we will spray bears using our bear spray canisters. As the saying goes, “A fed bear is a dead bear.” Allowing bears not to eat human food helps protect us, our fellow backpackers, and the bears themselves. Luckily, Applebee's campsite is decently populated with fellow climbers. This drives away bears for the most part as they do not want to deal with humans.

Weather: July/August is the best weather for the Purcell Mountains and the Bugaboos. There is limited rain and long sunny days. However, there still is that very present danger of rain storms, thunderstorms, and hail. These storms can have little to no effect on our activity or put us in a life-or-death situation. A small rainstorm while hiking would not be cause for alarm. However, dark storming clouds on the horizon, while we are 6 pitches up on a climb, is something to be very worried about. These storms can trap climbers on the wall and induce hypothermia, get struck by lightning, or allow climbers to get lost en route. These storms mostly come during the afternoon, so make sure we are waking up early for climbing and hiking objectives. Weather is possibly the biggest hazard, and we want to make sure we avoid any scenario where we are caught in the weather. We will subscribe to at least one Garmin InReach for weather updates so we know which days will be troublesome. However, in the alpine, weather can change in a matter of minutes, so we will constantly be aware. With the weather, we will be extremely conservative with our decision-making and only go out on days when the forecast looks good. We will always carry headlamps for any climbing or hiking objective in case it gets dark out. Good weather is considered as 35% chance of rain or less. If showers are predicted at 12pm for shorter routes, we

will attempt the route. If they are predicted sooner, we will not. For BC, we need an almost complete clear forecast. We will not attempt if there is above a 20% chance of rain in the afternoon.

Altitude: Our base camp is around 8000′. The tallest of the towers/mountains we will be climbing is no more than 11,500′. Although it is technically in the range for AMS (Acute mountain sickness), it is unlikely Robbie or Cam will develop this after spending the summer climbing 14,000 ft peaks. However, it is still something to be aware of. The symptoms of AMS are headache, nausea, vomiting, loss of appetite, fatigue, or poor sleep. Neither Robbie nor Cam has ever had any case of AMS, however, this does not mean it could occur during this trip. In our training, we will be spending time at altitude during the semester before and in the two weeks before our expedition. Both of us are WFR certified, we are trained to notice these symptoms. If either is experiencing these symptoms, we will let our partner know immediately and descend. Going up will only make these symptoms worse.

Food/Water: Making sure we are eating and drinking enough will be vital. Bonking (not having enough calories in your body so one doesn't have any energy) creates a dangerous scenario where that person will no longer be able to continue safely. Dehydration and hunger affect decisions, inhibiting smart decision-making. We will make sure to carry ample water and 1-2 extra nutrition bars per person for each activity. We have allocated 3,500-4000 calories per day per person, ensuring that we will be properly fed, as we will be burning much more than that each day. On the BC route, we will carry extra cold food in case of an emergency bivy.

Glacial Travel: Snow is in abundance in the Bugaboos. Much of that snow is glacial, making travel more efficient in some cases, but also adds danger to an already dangerous environment. Two main dangers are crevasses and bergschrunds. Crevasses are a separation in the glacier, generally considered to be a deep crack in a glacier. These are dangerous because if a person were to fall in one without a rope attached to them, they could fall to the bottom of the glacier. Bergschrunds are cracks that appear between the moving ice of a glacier and the stagnant ice of a mountain. Or, another definition, is a separation of a glacier, but the lower part has stepped down. So there is a wall of snow/ice that is separated from the lower part of the glacier. This is extremely dangerous to try to cross, so we will not even attempt. Glacial travel is something Robbie and Cam have less experience with, so we will be choosing routes will relatively low complexity glacial travel. We will look at each approach individually, making sure we use the proper techniques required for each approach.
We will have dry-treated ropes, ice axes, crampons, and micro-tractions for most if not all climbs, allowing us to inherently have a glacial rescue kit on our person. Axes can be used as deadman's. Micro-traxs and prusiks will also be in our climbing kit, allowing us to use them for building a 3:1, or for ascending out of a couloir on a fixed-line. We will practice these techniques, and most likely take a class on it as listed in our training plane.
Climate change plays a large role in the glacial travel that we will encounter while in the Bugaboos. More on this in the climate change section. This warming does affect glaciers in specific ways. We are not likely to see any avalanches in the Bugaboos, except for a glide avalanche. (Which is still unlikely) This is when there is water running underneath the glacier/snow, creating an environment for a slide to be possible. Glide avalanches are low danger and low risk, but can be dangerous if one finds themselves in the wrong place at the wrong time. Because they are so slow, there is an implied positive reinforcement if others have traveled on or under the glide avalanche. If it was okay for that group, it should be okay for us. This is the wrong mentality to have, as a glide avalanche could let loose at any point. Most of the time they are slow and obvious, but they can release unexpectedly. It is best to use caution here and avoid them altogether.

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

If there is a need for any sort of self-evacuation that is life-threatening or extremely serious, we will use either Robbie or Cam's InReach to start the process of evacuation. The most important thing to do is to stay calm and assess the situation at hand. The InReach will send an SOS and GPS location to the search and rescue team that we call. Most likely Golden and District Search and Rescue. Through that, we will start a conversation with SAR and determine the best course of action. Through our WFR training, both Robbie and Cam know that SAR first needs to determine whether or not it is safe for them to enter the field. This means depending on the threat to life or limb as well as the weather, we could not see the SAR team for up to 12 hours.

We will text SAR through our InReach, letting them know information about our accident. They will be able to help aid us in a decision if a SAR-assisted rescue is necessary, as sometimes SAR doesn't need to come into the field. SAR is a last resort and is something that we want to avoid. Self-evacuation can be done by leaving gear at base camp or at a notable point on the trail. The injured person will not carry any gear and the non injured person will carry only the essentials. If both of us are unable to move from our position, we will contact a family member with a prerecorded message letting them know we are in trouble. That family member will be Camden's father, Thomas Burke. He will have been instructed to contact Golden and District Search and Rescue and let them know which route we were climbing or hiking that day. Tom will have a copy of our day-to-day plan.

While climbing and hiking, we will always have a basic med kit with us. Robbie or Cam will use their WFR training to once again assess the situation if medical attention is required. We will do what we know how to do. WFR gives basic training in wilderness medical aid. Those are the skills that we will adhere to and do to the best of our ability. There is no need to try to operate any sort of equipment or procedure that we do not know fully, as this could cause more harm than good. Both Robbie and Cam have failed and bailed plenty in the mountains. We will use our previous knowledge of failing/bailing in the mountains to make safe decisions that put us far away from any further harm.
If the emergency is happening on the wall, in the middle of the climb, we will use the knowledge we have. Both Robbie and Camden have bailed off of multi-pitches before. If there is a medical emergency, we will use the knowledge and skills we have to get down safely. Both Robbie and Cam know basic rappel techniques with a partial-functional or non-functional partner. Camden and Robbie will be taking a Rock Rescue course in the spring to further advance these skills.
For lowering with a nonfunctional partner, one uses their 120cm length sling. Girth-hitch the sling to your partner's belay loop, and then tie a small overhand on a bight 8 to 10 inches from your partner's harness. That's where the atc clips into the system. The injured person's extension should be slightly shorter than the rappeler. This allows the rappeler to stabilize, assist, and guide him down as needed.

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

N/a Cam
Robbie: For my asthma I will be bringing my normal inhalers. I will also have at least two replacements for each one stashed in the car. My asthma is mild enough that if I do not have my inhalers it will not be dangerous for me to continue being in the backcountry and I will still be able to perform at a fairly high level.

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

Closest Town: Brisco, BC, 28.5 miles away

Closest Facility to Applebee Campground: The Kain Hut, 0.5 mi away

Closest Hospital: Invermere & District Hospital,
850 - 10th Avenue Invermere BC V0A 1K0,
Normal: (250)-342-9201 Emergency: 911
ER open 24/7

Helicopter Rescue: Golden and District Search and Rescue, 75 miles away, Box 1332, Golden, BC V0A 1H0
911 for emergency calls or (250) 344-5902 for non-emergency

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

Both Robbie and Cam will have their own personal Garmin InReach Mini. When climbing, scrambling, or anytime we leave the campsite, we will have at least one with us at all times. The other will be left at camp. We will also have a solar panel to change phones, Inreaches, and watches.

Climate change is affecting how we recreate outside. Please list any expected hazards associated with climate change and how you might address rapidly changing conditions.

Climate change is at the forefront of our minds with this trip. Glaciers are very important for travel in the bugaboos. One of the main reasons we are planning on having a flexible schedule is due to the vital col melting out. In years past, the glacial col has stayed, allowing travel throughout the climbing season. In recent years, it has melted at irregular intervals, with winter snowfall levels heavily affecting the longevity of the col and surrounding glacier travel points. If the col is beginning to melt, we will go earlier. If the col has melted by the time we are there, we will reassess our decision to climb routes that require the col.
Wildfires are also a concern. Canada, Washington, Idaho, Montana, Oregon, and many other states have a terrible habit of catching on fire during our proposed dates. Golden BC/Banff has seen tragic wildfires in the recent past as well. If wildfires are seemingly affecting the area in which we will be traveling, we will contact the committee or Kate to see what the best plan of action is.
One major factor we have discussed in detail with Kate is the possibility of nature getting in the way of our ability to go to the Bugaboos. If, for some reason we are not able to make it up to Canada and have to totally bail from the trip entirely, we plan on using the funds to go to the Cirque of the towers in the Wind River Range WY. We will attempt routes of the same grade. However, almost everything that we would attempt would be less complex and less committing than most of the routes in the bugs, for example Becky-Chouinard. Camden has already had an approved grant to the Cirque of the towers, and knows the area. We would send Kate a list of routes we plan to do, with the same detail that we have proposed here in this application. Posting them here seems unnecessary as Cam has already gotten an approved expedition grant for the area, and it is unlikely that we will be forced to go there. That being said, if that is the case, we will send a mock proposal with the same depth that this proposal contains. Luckily, the funds are almost exactly the same. The extra gas money we would use to hire donkeys to bring our gear to Big Sandy Lake/Jackass Pass. Very little extra funds would be needed.

Budget

Upload a detailed and complete expedition budget.

Bugs Gear list.pdf (173KB)
Uploaded 1/22/2025 10:41am by Camden Burke

What is the total funding request for your trip?

$2684.25

What is the funding request per person?

$1342.13

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

The biggest factor in minimizing expenses is the way we travel to Canada. We are carpooling from Cam's house in Boulder, which is a 20-hour drive to the trailhead. By carpooling we are cutting the gas cost by half. We also will be using almost all of our own personal gear, eliminating the need for rentals besides a few miscellaneous items. We will also try to buy in bulk, eliminating single-bought items where we can. We have also taken off $1000 of the $1500 proposed for car maintenance.

Expedition Agreement

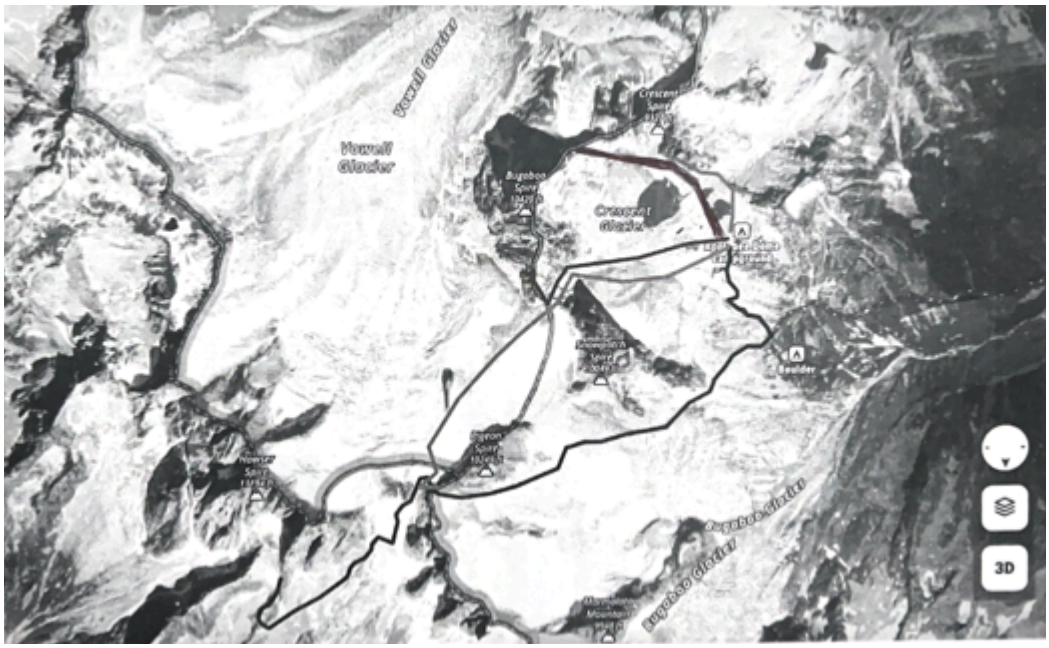
The Expedition Agreement must be printed, read, and signed in ink by each member of the expedition team. Once the Agreement is filled out, it should be scanned into PDF format and uploaded here. The group application will not be considered complete until this form is submitted

Untitled document.pdf (304KB)
Uploaded 1/22/2025 10:53am by Camden Burke

Route Descriptions

Approach GPS Maps:

https://webmap.onxmaps.com/backcountry/share/content?share_id=01JJ6DDXWDGXHZVHBHSKNJ177F



Standard Gear For all Routes:

- Standard Rack
  - 1x .3 cams
  - 2x .4-2 cams
  - 1x #3 cam
  - 1x #4
  - 2 sets of nuts, 1 offset, 1 regular up to .5
  - 12 Alpine draws
  - 6 Standard lightweight draws
- Each person will have
  - Personal Rappel gear, including 120 sling, atc, prusik
  - GriGri belay device
  - Nut tool
  - Approach shoes
  - Climbing shoes
  - Helmets

    - Harness
    - Microspikes or crampons
    - Crack gloves
    - Personal pack
    - Waterproof Shell
    - Insulated Synthetic Layer
    - Chalk Bag
    - Rope Knife
    - Sunglasses
    - SPF clothing which covers the entire body
    - 3 locking carabiners
    - 2 extra wire gate carabiner
    - Cell Phone
        - Robbie's phone is SOS-enabled
    - Crevasse rescue gear
        - In addition to the 120cm sling and locking carabiners, we will each have a Tibloc
    - Personal Hydration and Nutrition
        - Varies depending on the route
    - Fully Charged Head Lamp
    - 1 rocky talkie
    - Garmin inReach
- 1 ice axe per group
- Small first aid kit containing:
  (5) Bandage, Adhesive, Fabric, 1" x 3", (3) Bandage, Adhesive, Fabric, Knuckle, (3) Bandage, Butterfly Closure, (1) Bandage, Conforming Gauze, 2", (2) Dressing, Gauze, Sterile, 2" x 2", Pkg./2, (2) - Dressing, Gauze, Sterile, 3" x 3", Pkg./2, (2) Dressing, Non-Adherent, Sterile, 3" x 4", (1) Gloves, Nitrile (Pair), Hand Wipe, (1) Moleskin, Pre-Cut & Shaped (11 pieces), (1) Duct Tape, 2" x 26", (1) Bandage, Elastic with Velcro, 2", (3) Safety Pins, (1) Splinter Picker/Tick Remover Forceps, (2) After Bite Wipe (Ammonia), (2) Antihistamine (Diphenhydramine 25 mg), (2) Aspirin (325 mg), Pkg./2, (2) Ibuprofen (200 mg), Pkg./2, (2) Acetaminophen (500 mg), Pkg./2, (6) Antiseptic Wipe (Benzalkonium Chloride), (3) Alcohol Swab, (1) Tape, 1" x 10 Yards, (1) Skin Tac Topical Adhesive, Wipe (Isopropyl Alcohol), (3) Triple Antibiotic Ointment, Single Use (Bacitracin Zinc, Neomycin Sulfate, Polymyxin B Sulfate)
- Spf 50+ sunscreen
- 60m Beal Opera Rope
- 2 extra Triple A batteries for headlamps

Bivy Gear

- Each person will have
    - Rab storm bivy
    - Lightweight gloves
    - Extra dry socks

General rule for Bailing in the bugs:

This information holds true for all of our routes. When we say bailing, bailing means a full retreat off the mountain from our current point. If specified, sometimes this means completing the route, however, most of the time this means leaving gear on the mountain or using permanent anchors. On routes such as the

Northeast Ridge of Bugaboo Spire, BC on Howser tower, and the West Ridge of Pigeon Spire bailing will entail leaving gear. This means gear we have on us. We will use a minimum of two pieces of gear unless absolutely necessary to use one. If we are using one, this is an extreme emergency and we need to start thinking about calling SAR. (The Kain route has bolted anchors that we can use, as well as McTech Arete. For these we will still bring bailing gear) The extra set of nuts on our gear list can be used for bailing primarily, as well as extra lockers and wire gates. After using nuts we will transition to using cams for bailing. We will both have 120 and 180/240 length slings that we can cut/use for anchors. On larger routes, (greater than 4 pitches) we will have 2 20 ft cordelette to cut from to sling boulders or use for anchors. Slinging boulders and horns (natural features) is a great way to leave minimal gear. We will do our best to use fixed gear, as to limit our impact, but always making sure the fixed gear looks safe to use. Often backing it up if there is any doubt. In some cases there may be fixed gear that we can use to rappel from, however we will always assess the quality and safety of gear that we did not place ourselves before trusting it.

A note about hazards:

As listed in our hazard section, climbing is an inherently dangerous activity, but can be done safely. The alpine requires us to be on top of our game, and completely aware of ourselves and surroundings. All of the routes will contain these objective hazards: Rockfall, Ourselves, Glacial travel, Other parties, Weather, Food and Water, and possibly wildlife. Look at our descriptions of objective hazards for our management plan of these.

Kain Route (South ridge), Bugaboo Spire

5.6, Trad, Alpine, 1500 ft (455 m), 4 pitches, Grade III

Gear:

- Standard rack and personal gear

Approach:

0.8 miles 1,100ft

From Applebee camp follow vague trails and snow leading up towards Crescent Spire keeping on the left side of the first turn. Continue below McTech Area. Continue along the base of McTech until the clean rock turns to snow or scree. Continue about another 50m and head up to snow or scree to gain a steep right-trending slab in the reddish rock. The route ascends the left side of the steepening slab before breaking back left higher up over small ledges and steep blocks to the Bugaboo-Crescent Col.

Continue scrambling up the low fourth-class ridge to a terrace, part of the white dyke led system that girdles the right side of the east face. The climbing starts about 10m to the left of the actual arete in an alcove amidst stacked flakes and below an overhang.

Route Description:

The route starts on the left of a small pinnacle, and for the first three pitches keeps left of the crest of the ridge proper (5.7 maximum). The rest of the route follows the crest, up fun cracks, and then chimneys (5.7 maximum) to a final puzzling bit up over a block to the North Summit, so around to the right (SW), and then up to the top.

Descent:

From the south summit, chain anchors lie about 8m to the south overlooking the gendarme, which appears as a blade of rock from above.

1. Single rope rappel to the gendarme ledge
2. Single rope rap down the east side of the gendarme to a small ledge. Climb up and left to the next set of anchors
3. Rap towards the Kain route along a ramp
4. Rap down to another ledge, climb up, and leave again. Scramble along the ridge crest. Climb down onto a knoll where the ridge drops off steeply to the south. Cain anchors can be found on the left.

5-6. Rap two pitches down the east side of the ridge to gain ledges and ramps. Scramble down till it levels out the head south again to a set of chains anchors above a large jammed boulder. Stay on our near the ridge crest until you reach the Bugaboo-Snowpatch Col.

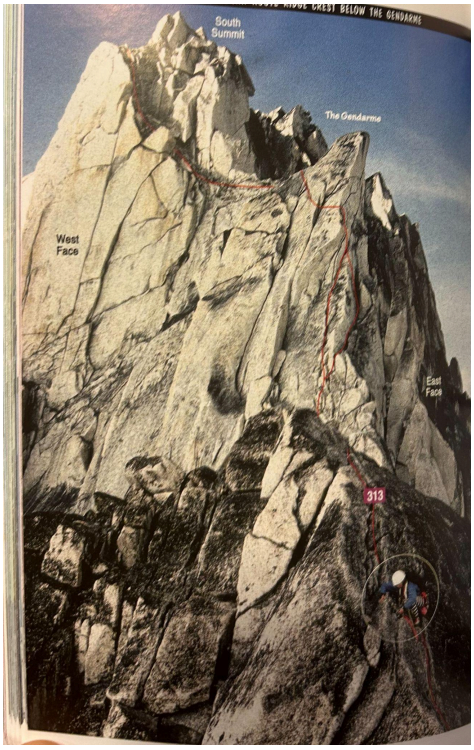
Risk Management:

- We will start early so that we will be able to climb and descend in the light
- There is some glaciated terrain on the approach
    - We will be roped up for these sections and will be carrying our normal crevasse rescue gear.
- There is the potential for rockfall throughout the route
    - We will be wearing helmets and will start early in an attempt to minimize the amount of parties around us
- In case of a medical emergency
    - If the injury is manageable we can bail back down the route at any point
        - Our standard rock has enough gear to build our rappel anchors if necessary
        - We are both adept in basic rope rescue techniques
    - If the injury is not manageable then we will both have devices capable of enacting our search and rescue plan

Training for B-C

This route will be a great introduction to Bugs climbing. We will use this opportunity to adjust our systems to the Bugaboo terrain while also familiarizing ourselves with navigating these types of climbs. Climbing this route will also be great preparation for climbing the Northeast Ridge.

Media


South Summit
The Gendarme
West Face
East Face
313


BUGABOO SPIRE KAIN ROUTE 139
Gendarme
from the Northeast Ridge
NORTHEAST RIDGE
EAST FACE
KAIN ROUTE
WEST FACE
NORTH FACE
BUGABOO SPIRE
313
Bugaboo-Snowpatch Col

Northeast Ridge of Bugaboo Spire

5.8, Trad, Alpine, 1500 ft (455 m), 10 pitches, Grade IV

Gear

- Bivy Gear
- Extra 20ft cordellete
- Extra set of nuts
- Beta photos from the Kain Route descent we will take while climbing the Kain route

Approach:

0.8 miles 1,100ft

From Applebee camp follow vague trails and snow leading up towards Crescent Spire keeping on the left side of the first turn. Continue to below McTech Area. Continue along the base of McTech until the clean rock turns to snow or scree. Continue about another 50m and head up to snow or scree to gain a steep right-trending slab in the reddish rock. The route ascends the left side of the steepening slab before breaking back left higher up over small ledges and steep blocks to the Bugaboo-Crescent Col.

Continue scrambling up the low fourth-class ridge to a terrace, part of the white dyke led system that girdles the right side of the east face. The climbing starts about 10m to the left of the actual arete in an alcove amidst stacked flakes and below an overhang.

Route Description

1. Pull a small overhang to enter a crack system. Follow the left side of a chimney system. At the top of the system traverse left to gain a ledge system below and right of a left rising series of flaky grooves. (5.8+ 50m)
2. Climb the grooves while trending left to gain the top of a pillar (5.6 60m)
3. Climb down and left until it is possible to continue upwards. Climb a right-arching dyke system heading back to the right. Belay to the right of the ridge crest. (5.7 60m)
4. Gain a shallow right-facing corner on the right side of the arete. Follow this corner, near the end of this pitch continue over the first ledge to belay at the higher ledge which is below the chimney pitches. (5.7 50m)

5-7. Step right from the previous belay. Following an often snowy chimney system. Once you exited the chimney belay from the ridge crest on top of a good rest. (5.6 150m)

8. Follow cracks on the right side of the ridge passing two short and difficult steps. Establish a belay where the ridge kicks back (5.7 60m)

9+. Climb 4th class terrain following the ridge. Work the right side of the ridge to the summit.

Descent

Rappel down the East face of the Northern summit. Follow the exposed ridge crest down to the substantial col. A spiral ascent, starting to the north, of the southern peak provides access to the Kain route descent which we will have previously done. When scouting the descent while climbing the Kain Ridge we will be taking photos of the rappel stations so that we can reference them later on this descent. If we cannot find the stations we will have the previously mentioned additional gear to establish our own anchors. For the lower scrambling sections, we are both familiar with the short roping technique in case we deem that necessary

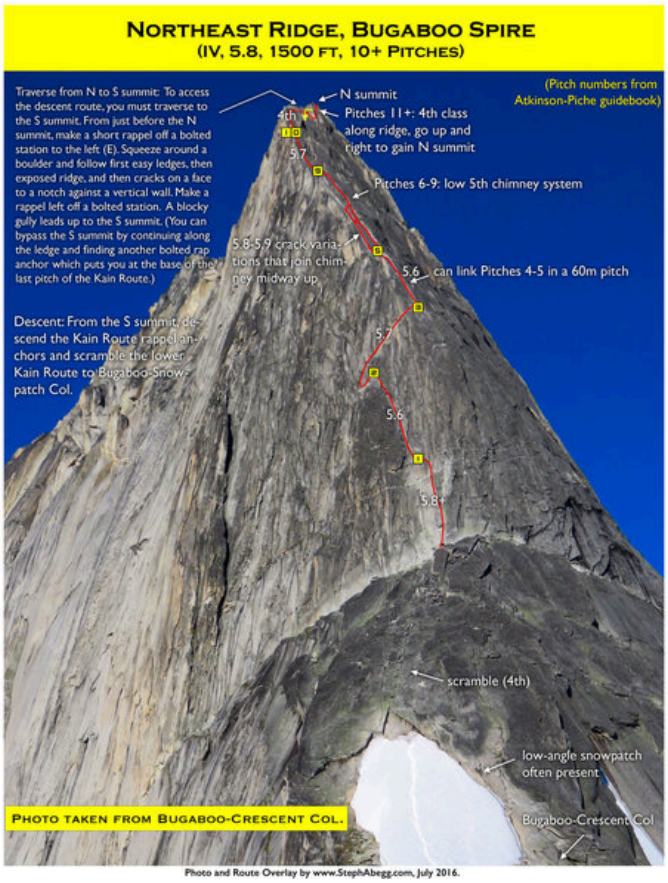
Risk Management

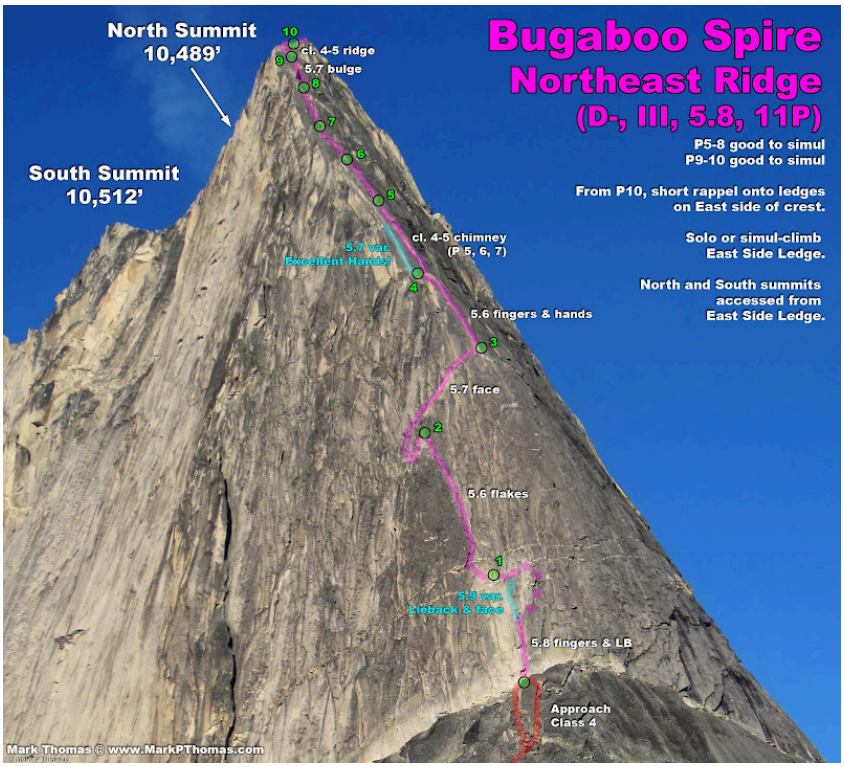
- The Northeast Ridge is notorious for benighting climbers.
    - We will have already climbed the Kain route and are following the processes mentioned in the “descent” section
        - We will have an extra 20ft cordellete and an extra set us nuts to build our own rappel anchors
    - We will also have our bivy gear
- For weather-related issues
    - We will have the option to bivy at any of the belay ledges if needed
    - The is also the option to bail after the third pitch on bolted anchors
- In case of a medical emergency
    - If we deem it possible that we can bail without additional help
        - We will bring gear to do so at any point
        - The bolted anchors after the third pitch provide an easy route of descent from the lower part of the route
        - There are also anchors to assist in lowering a patient from the Bugaboo Spire-Crescent col back down to the glacier
    - If we deem an evacuation to be rapid both climbers will devices able to send out an emergency signal
        - Our bivvy gear will allow us to shelter in place until help arrives

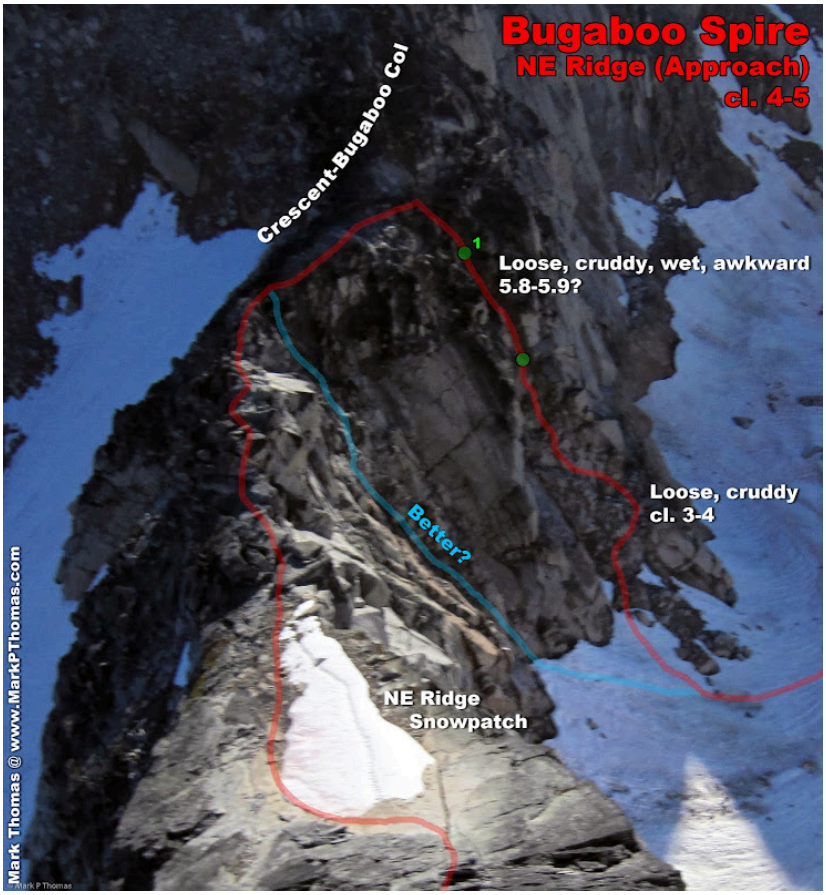
Training for B-C

This route will provide the opportunity to practice and improve our systems for long alpine objectives in a simpler and less committed manner. The route will require us to do our approach and possibly descend in the dark. This will be invaluable for the B-C for which we will have to spend a significant amount of time moving through complex terrain in the dark. Nothing is better for preparing to do large alpine objectives than by doing other large objectives. This experience will build on top of the larger objectives we will be tackling as a part of our training plan.

Media


NORTHEAST RIDGE, BUGABOO SPIRE
(IV, 5.8, 1500 FT, 10+ PITCHES)
Traverse from N to S summit: To access the descent route, you must traverse to the S summit. From just before the N summit, make a short rappel off a bolted station to the left (E). Squeeze around a boulder and follow first easy ledges, then exposed ridge, and then cracks on a face to a notch against a vertical wall. Make a rappel left off a bolted station. A blocky gully leads up to the S summit. (You can bypass the S summit by continuing along the ledge and finding another bolted rap anchor which puts you at the base of the last pitch of the Kain Route.)
(Pitch numbers from Atkinson-Piche guidebook)
N summit
4th
5.7
Pitches 11+: 4th class along ridge, go up and right to gain N summit
Pitches 6-9: low 5th chimney system
5.8-5.9 crack variations that join chimney midway up
5.6 can link Pitches 4-5 in a 60m pitch
5.7
Descent: From the S summit, descend the Kain Route rappel anchors and scramble the lower Kain Route to Bugaboo-Snowpatch Col.
5.6
5.8
scramble (4th)
low-angle snowpatch often present
PHOTO TAKEN FROM BUGABOO-CRESCENT COL.
Bugaboo-Crescent Col
Photo and Route Overlay by www.StephAbegg.com, July 2016.


North Summit
10,489'
South Summit
10,512'
Bugaboo Spire
Northeast Ridge
(D-, III, 5.8, 11P)
P5-8 good to simul
P9-10 good to simul
From P10, short rappel onto ledges on East side of crest.
Solo or simul-climb East Side Ledge.
North and South summits accessed from East Side Ledge.
10
cl. 4-5 ridge
9
5.7 bulge
8
7
6
5
cl. 4-5 chimney (P 5, 6, 7)
5.7 var. Excellent Hands!
4
5.6 fingers & hands
3
5.7 face
2
5.6 flakes
1
5.8 var. Lieback & face
5.8 fingers & LB
Approach Class 4
Mark Thomas @ www.MarkPThomas.com


Bugaboo Spire
NE Ridge (Approach)
cl. 4-5
Crescent-Bugaboo Col
1
Loose, cruddy, wet, awkward
5.8-5.9?
Loose, cruddy
cl. 3-4
Better?
NE Ridge
Snowpatch
Mark Thomas @ www.MarkPThomas.com

Paddle Flake Direct, Crescent Spire

5.10b, Trad, Alpine, 5 pitches 500ft Grade III

Gear:

- Standard rack and personal gear
- 8.2 mm 60m rope of rappels

Approach:

From the Applebee campground ascended upwards passing between the Crescent Towers and the Crescent Tarn. Once past the lake climb up about 40’ from the Crescent Glacier to a large ledge. Follow the ledge to the left to find the first pitch. Paddle Flake Direct is positioned about 40’ to the left of the McTech arete.

Route Description

1. Start about 10' to the left of a large left-facing dihedral and follow finger cracks up the face. Two overhangs are encountered on this pitch which are bypassed by climbing left around the first one and right around the second. Belay just above the second overhang at a small stance. (5.10b/c 50m)
2. Follow cracks and face climbing to a steeper upper wall and belay (5.10b/c 50m)
3. Continue climbing the face heading up and right to a chimney, struggle up the chimney, and belay on top at a two-bolt anchor. (5.10- 25m)
4. Step right and climb up a steep crack corner to perfect hands through a roof. Pull the roof and belay in a crack to the left. (5.10b/c 35m)
5. Climb straight up awkward finger to fist-sized cracks to the top of the ridge (5.10b/c)

Descent

To descend walk east up the ridge to the summit of the McTech Arete. There is a chain anchor on the south face. Descend between the bolted rappel anchors till you reach the bottom of the south face.

Risk Management

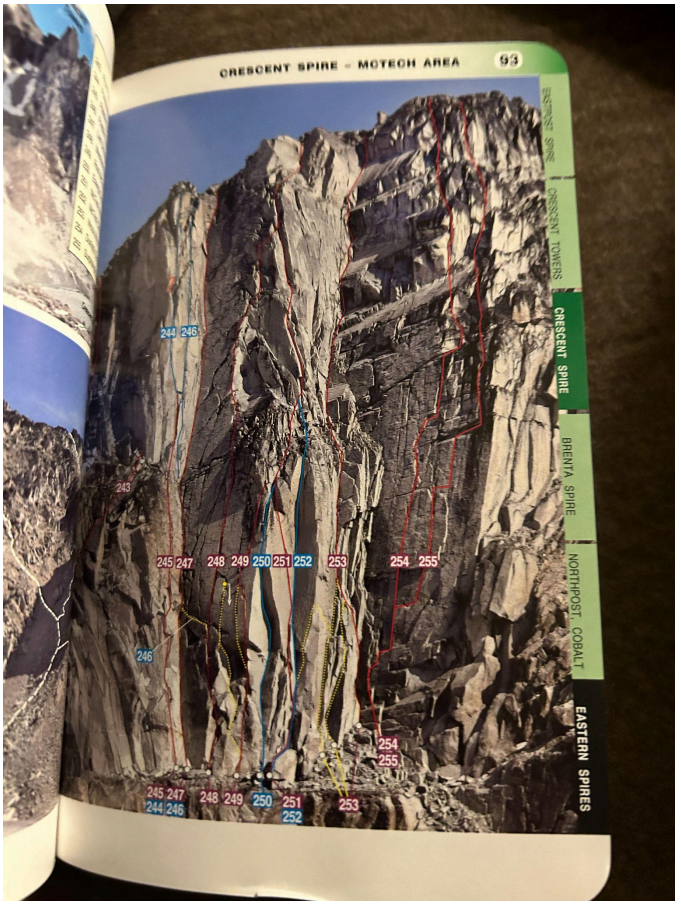
- The short approach and short nature of this route make bailing at any point possible.
    - Our standard rack has enough gear that we can bail back down the route from any point.
- This is a very popular zone to climb in so there is an increased chance of rockfall caused by other parties climbing above us
    - To manage this we will make a concerted effort to start our approach early so that we will be the first party up

        - If we are not the first party we will wait for the party ahead of us since this is a relatively short route
- In case of a medical emergency in which we deem a rapid evac necessary, we will have devices capable of enacting our emergency search and rescue plan
- In case of a nonrapid evac
    - Both partners are familiar with basic rope rescue technique and we will have enough gear to bail down the route at any point.

Training for B-C

This route will provide us with valuable exposure to what 5.10 climbing in the Bugaboos entails. Five pitches of 5.10 will give us a good understanding of what the two 5.10 pitches on the B-C require. Additionally, this climb will be a great opportunity to practice implementing basic aiding techniques which could be useful for tackling the last pitch of the B-C.

Media:



Beckey-Chouinard Route, South Howser Tower

5.10, Trad, Alpine, 2000 ft (606 m), 15 pitches, Grade IV

Gear:

- Standard rack and personal gear
- Bivy gear
- Extra set of nuts
- 2 20ft correlates
- 8.2mm 60m rope for rappels

Approach:

3.4 miles and 3,300 vert. Glaciated and Rocky terrain.

From the Applebee Dome campground follow the established trail down to the Conrad Kain Hut. From the hut continue east onto glaciated terrain. Previous reports say that this glacier is usually very snowy. For the snowy terrain, we will wear our leather semi-water proof approach shoes and carry an ice axe to anchor during a crevasse rescue. During this section, it is also important to be roped up in case a rescue is necessary. Wrap around the southern side of Snowpatch Spire. Continue West staying below the left side of the Pigeon Spire. Follow the south base of Pigeon Spire to gain the Pigeon-Howser Col. From the Col descend southwest following the base of the southern face of South Howser Tower. This descent will lead to the East Creek Camp.

This section provides the most technical portion of the approach as there were many reports of clear ice in this section in August of 2024. For this section, we will have our crampons, however, our main method of managing this hazard will be to take extra care and recognize that this will be a slower section. From East Creek Camp follow the scree down along the base of the Catalonian Eall to gain a shallow scree gully leading up to the lower ridge that rises into the Beckey-Chouinard (B-C) route proper. Third-class slabs and boulders lead to where the ridge narrows and a large split boulder blocks access. Rope up here and begin the proper climbing on pitch one. The start of the route is obvious and follows the right portion of the buttress.

Route Description:

1. Step down and right to gain an exposed slab on the right side of the buttress. Climb cracks and flakes to a block belay on the ridge crest. (5.5)

2-3. Climb up the ridge crest to a belay, and continue up the crest to a steepening then follow cracks and grooves left of the crest to a ledge belay behind a large block (5.6/7)

4. Follow steep cracks just right of the crest to the left edge of a small overhanging bulge. Make an insecure move over the bulge and follow cracks past a horn to a steep, small belay ledge. (5.10- 50m)

5. Climb up cracks on the left side of the arete, stepping to the right side part way up and following cracks to easy ground. Scramble over easy ground to gain a flake and a short chimney to the left, which leads to a slab belay. (5.8 60m)

6. Handrail right over the arete and cross cracks to a big left-facing corner. Climb the corner to an alcove belay behind a jutting block. (5.8 60m)

7-8. Continue up this stellar corner to a crack and belay at scree ledges. Then scramble over scree and belay at the upper bivy sight. (5.8 60m)

9. Climb a chimney, cracks, and over blocks to a block belay where the wall steepens. (5.6)

10. Step left into a short strenuous crack to a ledge. Go right past a flake to two opposing corners. Climb the right hand to the bivy ledges below the Great White Headwall. (5.8)

11. Bump the belay to the far left end of this ledge. Climb the strenuous wide crack to the top of the small tower and continue up a corner cracks system. Follow the corner until able to break out left and up a short, steep wall to a small ledge belay. (5.10- 55m)

12. Step up above the belay and make a hard balance move right back into the corner. Follow the corner past the guillotine blocks and through a tough squeeze to belay at the start of a steep gully. (5.9 60m)

13. Take the gully over chockstones, then steepen into a capped corner. Climb the second crack on the left wall to a belay at the base of a long, shallow, right-facing corner. (5.9 60m)

14. Follow the corner to a two-pin belay at a small notch. (5.8 30M)

15. Climb left, over small, delicate crux moves to gain the arete (5.10c free) then into a gully or tension across (A0). Continue more easily up the gully to a belay at its top.

From the top of the gully, step down right to gain rappel slings for a 20m rap to ledges on the south side. Climb up and right over broken ground and around to harder, indistinct buttresses to gain the ridge just right of the summit. This is steep and broken fourth-class terrain with numerous short, mid-fifth-class steps.

Descent (double ropes or tagline needed)

1. Scramble W. of summit block to find bolted anchor above vertical cube (28m rappel). Then scramble on ledge NW and drop down to another anchor
2. Rappel NW along the ridge 30 m. Do not rappel onto N. Face

3. Rappel steep W-facing wall to the station on climber's left (25m)
4. Rappel steep wall to large ledge (35m)
5. Rappel low-angle ledge to the gully (32m)
6. Rappel steep NE facing buttress staying climbers right of steel gully (32 m)

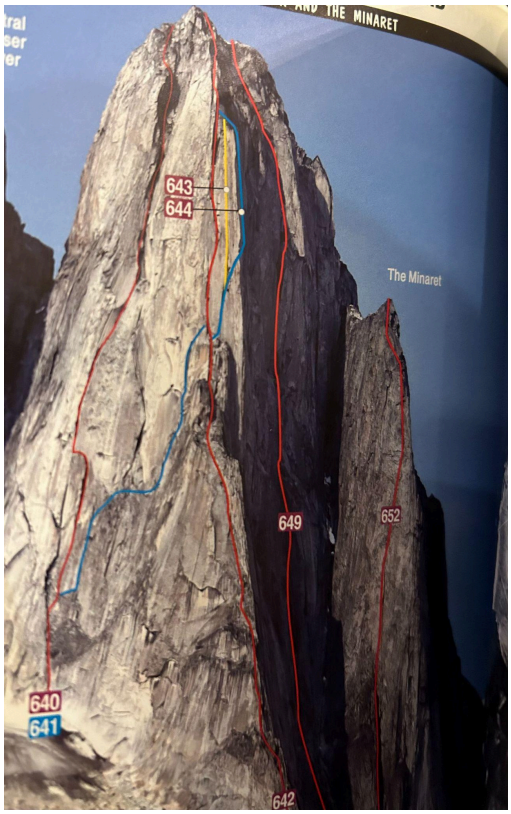
7-8. Stay on the buttress and continue rappelling until over Bergschrund.

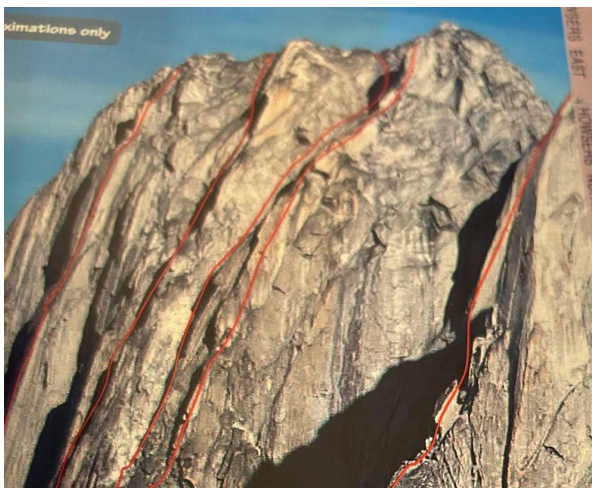
Risk Management

- During very high snow years there can be some snow in the chimney sections of this climb
    - If we encounter a chimney with excess snow that is im-passible we will bail and descend the route. We will have ice axes so it will be possible to use them if there is any sort of leverage we can use off of snow/ice. If there is not enough protection, we will bail.
        - We have enough additional gear to bail down at any point
- We will each be carrying a bivy in case of a few different scenarios
    - Multiple locations - marked on maps
        - Bottom of the climb in the East Basin Camp
        - At the top of pitch 8
        - Near the summit of descending onto the summit ridge.
        - Bottom of the rappels on the glacier
    - We will have our standard bivy gear but with enough food and water to survive 32 hours
    - In addition to our normal medical kit, we will also bring a space blanket.
- Both climbers will have devices that can send an SOS message throughout the climb.
    - We will be bringing a portable charger with at least a full phone charge to recharge these devices
- To manage risk on the approach:
    - We will be bringing crampons and an ice axe.
    - For glaciated terrain, we will be roped up and carrying our crave rescue kits
    - Before we lose cell service we will check trip reports to ensure that it will be safe
- To manage daylight:
    - We will have a hard cutoff to be roped up and climbing at 7 am (sunrise)
        - This means being walking before 3:30
    - At any point, we will have enough gear to rappel down the route
    - If we run out of daylight and do not feel like we will be able to continue we will each have our bivvy gear.
- If inclement weather is approaching we have two options
    - At any point before pitch 10, we can bail rappelling back down the route
        - We have determined that if we see a storm coming after pitch 10 it would be faster to summit and then attempt to rappel. If it is too extreme to continue up the route, we will descend and possibly bivy at pitch 8.
        - We will each be bringing a correlate that is 20ft long to use as bail material.
        - We have two sets of nuts so we can leave nuts

    - If we decide that we cannot abandon the route in the current conditions or we cannot travel back to our base camp once we have descended we have the same bivy options as the time-related issues.
- In the case of an injury, we have multiple options
    - If we deem an evacuation necessary we have the same options as if there is a weather-related evacuation
        - We are both adept at basic rope rescue techniques and are confident hauling and or rappelling with a semi-functional or un-functional patient
    - If we decide that an evacuation needs to be rapid or that the patient cannot be moved we will call for a rescue
        - We will have fully charged emergency devices
        - We will have the previously mentioned bivy gear so that we can shelter in place for extended periods while we wait for additional rescue services
    - If we have an injury where we cannot continue upwards after pitch 10 and rescue will take too long to arrive we will have enough cordellete and extra nuts to bail down the entire route.
- To manage overhead hazards such as rock fall we will both be wearing out helmets.

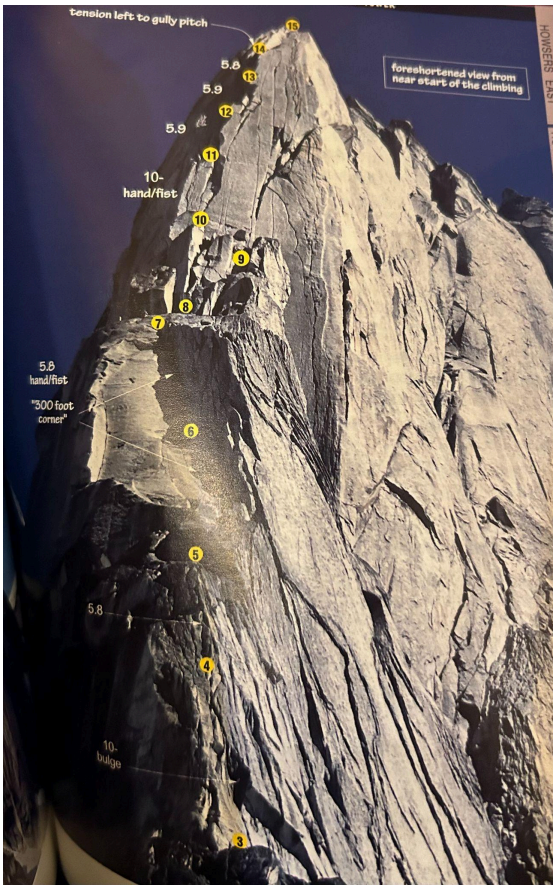
Media

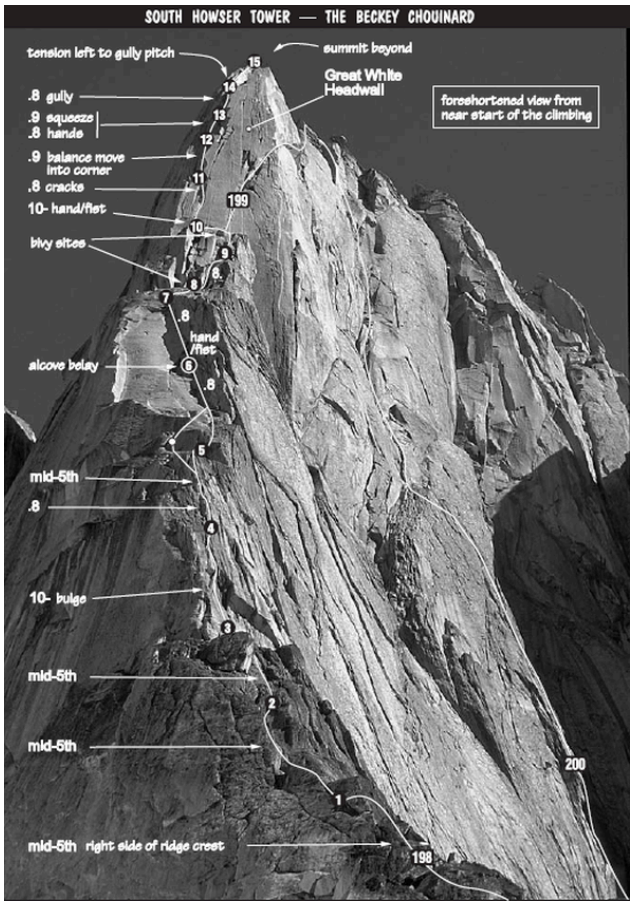


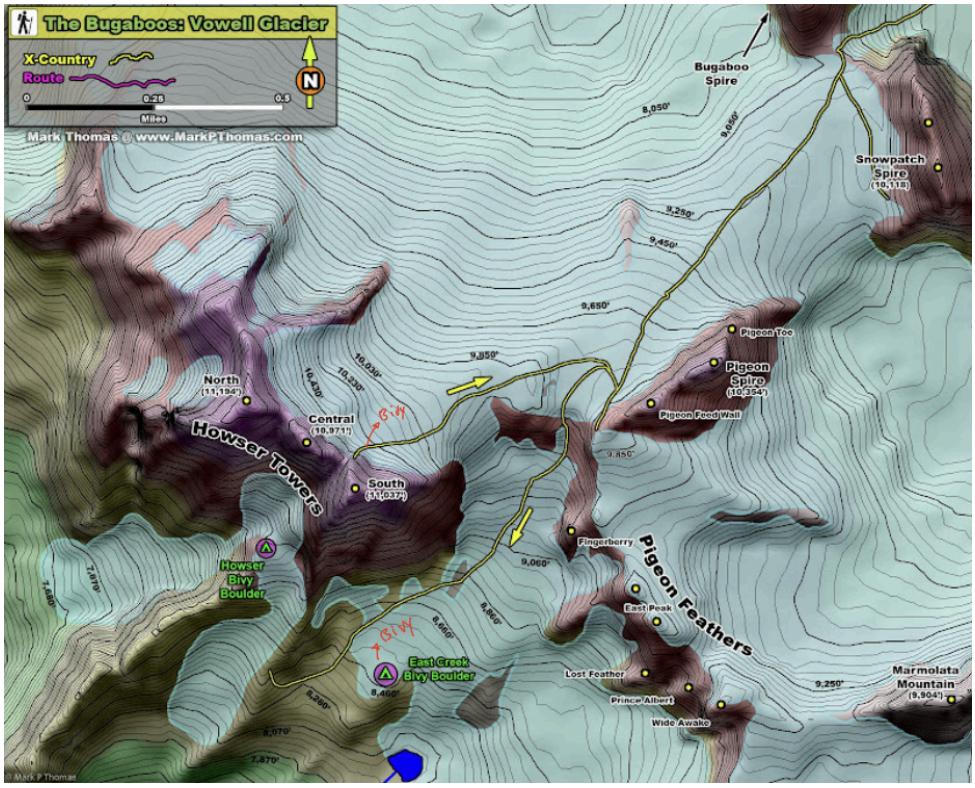


BECKEY-CHOUINARD, SOUTH HOWSER TOWER
(IV, 5.10, 2000 FT, 15+ PITCHES)

PHOTO TAKEN FROM THE SCRAMBLE UP THE LOWER RIDGE.


tension left to gully pitch
foreshortened view from near start of the climbing
5.8
5.9
5.9
10-
hand/fist
5.8
hand/fist
"300 foot corner"
5.8
10-
bulge


SOUTH HOWSER TOWER — THE BECKEY CHOUINARD
tension left to gully pitch
summit beyond
Great White Headwall
foreshortened view from near start of the climbing
.8 gully
.9 squeeze
.8 hands
.9 balance move into corner
.8 cracks
10- hand/fist
bivy sites
alcove belay
hand fist
mid-5th
.8
10- bulge
mid-5th
mid-5th
mid-5th right side of ridge crest
199
200
198


The Bugaboos: Vowell Glacier
X-Country Route
Mark Thomas @ www.MarkPThomas.com
Bugaboo Spire
Snowpatch Spire
Pigeon Toe
Pigeon Spire
Pigeon Feed Wall
North
Central
Howser Towers
South
Howser Bivy Boulder
East Creek Bivy Boulder
Pingerberry
Pigeon Feathers
East Peak
Lost Feather
Prince Albert
Wide Awake
Marmolata Mountain

West Ridge of Pigeon Spire

5.4, Trad, Alpine, 1500 ft (455 m), Grade III

Gear:

- Standard rack and gear

Approach:

From the Applebee campground descend to the Kain hut and then continue up the Bugaboo-Snowpatch Col. Then follow the Upper Vowell Glacier west toward Pigeon Spire. Walk past the Pigeon Spire to the north to the highest point of the Vowell Glacier and scramble south to the crest of the West Ridge. There is an outhouse near the ridge with signs leading to it which will indicate you are in the right place.

Route Description:

From the low point on the ridge scramble east to the first summit staying near the ridge crest. Follow slabs down to a saddle and then continue up the ridge toward the second summit. Stay near the crest until you get to a steep section that is avoided by following a ledge to a corner on the north side of the ridge. Some easy fifth-class down climbing to the north will get you to the col between the second and main summits.

Move left beneath the summit following ramps until you reach the bottom of the lab angling up to the right. Climb the slab through a chimney to a loose gully on the left. Climb the gully until you get to a wide left-angling crack. Step right to a large flake and chimney and then back left to a 5.4 handrail. After the handrail, the terrain will continue to give way to easier climbing until you reach the summit.

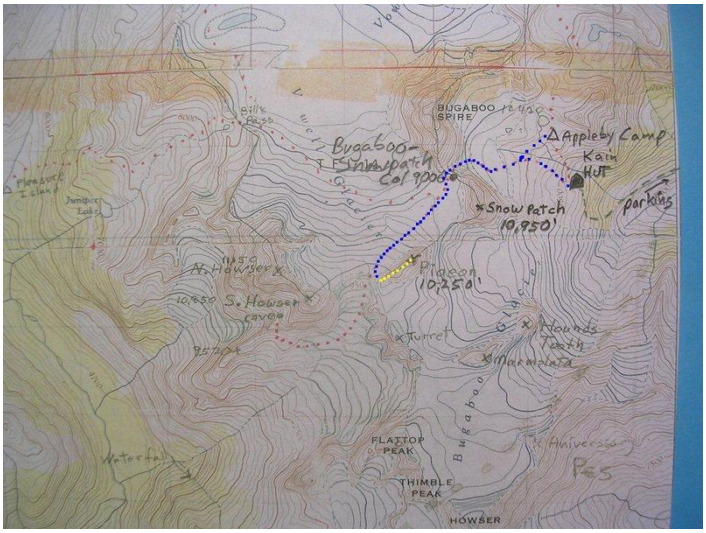
Descent:

Make two single-rope rappels off the summit down to the icy ramps. Follow the same route you just ascended back down to the ground. If we are not comfortable with descending we are both familiar with short roping techniques and will have enough gear in our standard

Risk Management:

- Due to the mixture of class 4 and five climbing, we will have enough gear to bail down the route at any point
- If there is a medical emergency where one partner is non-functional
    - We will be carrying a GPS device to enact our emergency plan if needed.
    - We are both familiar with and will have the gear to assist the injured partner in descending the route.

Media:


BUGABOO SPIRE
Bugaboo-Snowpatch Col 9000'
Applebee Camp
Kain Hut
Snow Patch (10,950')
parking
Pigeon 10,250'
Turret
Hounds Tooth
Marmolata
FLATTOP PEAK
THIMBLE PEAK
HOWSER


Pigeon Spire
West Ridge
(II, 5.4)
10,250'
5.4
Optional Rappel
5.4
Optional Rappel
cl. 5
From Applebee Camp
ca. 9,930'
Toilet
To Beckey-Chouinard
Mark Thomas © www.MarkPThomas.com

Item	Quantity
Personal Clothing	
Puffy jacket/synthetic	1 per/person
Hardshell/ Rain Jacket	1 per/person
Long Underwear	1 per/person
Base Fleece Shirt	1 per/person
Long Sleeve Sun Shirt	1 per/person
T-shirt	2 per/person
Climbing Pant	1 per/person
Shorts	1 per/person
Underwear	3 per/person
Rain Pants	1 per/person
Beanie	1 per/person
Cap	1 per/person
Gloves	1 pair/person
Socks	5 per/person
Group Gear	
Jetboil Flash	1 per/group
Crux Pocket Rocket	1 per/group
Iso Four Season Fuel	900g/ group
Pan	1 per/group
Pot	1 per/group
Lighters	2 per/group
2 Person Tent	1 per/group
Battery Pack	1 per/group
Charging Cord(s)	1 per/group
MSR Water Filter	1 per/group
Aquamira	1 per/group
Solar Pannel	1 per/group
Rockie Talkies	2 per/group
Stormproof Matches	2 boxes/ group
Book	2 per/group
Deck of cards	1 per/group
Cribbage board	1 per/group
Personal Gear	
Headlamp	1 per/person
Extra Batteries	2 sets per/person
Toothbrush	1 per/person
Toothpaste	50g per/person

Sunscreen	150g per/person
Sunglasses	1 per/person
0 Degree Sleeping Bag	1 per/person
Sleeping Pad	1 per/person
Cutlery	1 set per/person
Plate	1 per/person
Boots	1 per/person
Trekking Poles	1 set per/person
Climbing Pack 20-35L	1 per/person
Backpack 70L+	1 per/person
1500mL Nalgene	1 per/person
Bug Spray	1 per/person
3L Hydration Bladder	1 per/person
Bowl	1 per/person
Bivy	1 per/person

Contingency/ First Aid

Medicine

Ibuprofen	20 doses/ group
Tylenol	20 doses/ group
Benadryl	20 doses/ group
Electrolytes	30 packets/ group
Vaseline	45g/ group
Antacid Tums	28 doses
Cortizone cream	60g/ group

Wound Management

Band Aids	1 Assorted Size box/ group
Gauze Pads	10 pads/ group
Antiseptic Wipes	10 pads/ group
Gauze Roll	3 rolls/ group
Moleskin	5 sheets/ group
ACE Bandage	1 per/ group
Adhesive Tape	2 rolls/ group

Tools

Tweezers	1 per/group
Gloves	2 pair/ group
Irrigation Syringe	1 per/group
Safety Pins	6 per/ group
InReach Comm.	1 per/person

Sewing Kit	1 per/group
Small Duct Tape Roll	1 per/group
Tent Repair Kit	1 per/group
Laminated note with emergency numbers and SOAP Notes	1 per/group
Voile Strap	2 per/ person
Clothing Patches	1 kit/ group

Climbing equipment

Harness	1 per/person
Helmet	1 per/person
Nut tool	1 per/person
Chalk Bag	1 per/ person
Cordalette	1 per/person
Climbing shoes	1 per/person
Approach shoes	1 per/person
Guide ATC	1 per/person
Gri-Gri	1 per/person
3rd hand	1 per/person
60m Climbing Rope, 8.2	1 per/ group
60m Climbing Rope, 8.5	1 per/ group
#4 Cam	1 per/ group
Double Set of cams, sizes .2-3	2 per/ group
Two set of stoppers	1 per/ group
Alpine draws	12 per/ group
Standards Draws	6 per/ group
Extra lockers	3 per/person
Extra carabiners	4 per/person
Rope knife	1 per/ person

Supply One

Break Fast	
Dehydrated Hash Browns	$10
2 loaves of Dave's Killer Bread	$12.38
2 bundles of bananas	$2.99
Honey bottle	$0.48
Snacks	$9.98
2 Boxes of Chex Mix	$9.98
Chocolate Chips	$4.99
Walnuts	$12.49
Peanut M&Ms 38oz	$9.98
2 Power up trail mix 14 Oz	$10
2 Clif Bloks Variety packs	$59.98
3 Calabrese Sausages from Nuts.Com	$30.97
4 Cheese Brothers Chedar blocks	$49.16
Dinner	
5x Patagonia salmon	$70
2 packs of xl flour tortillas	$6.30
2 Cans of Mother Eart Dehyudrated Refried Beans	$30.30
Minute Rice 28oz	$3.99
3 Cabot Monteray Jack Cheese Blocks	$11.07
32 oz of Rotini Pasta	$3.88
2 sticks of butter	$2.42
4.23 oz packet of Simply organic tomatoe powder	$14.95
6x Backcountry pantry	$77.94
Total	$366

Supply Two

Break Fast	
Dehydrated Hash Browns	$10
2 loaves of Dave's Killer Bread	$12.38
2 bundles of bananas	$2.99
Honey bottle	$0.48
Snacks	$9.98
2 Boxes of Chex Mix	$9.98
Chocolate Chips	$4.99
Walnuts	$12.49
Peanut M&Ms 38oz	$9.98
2 Power up trail mix 14 Oz	$10
2 Clif Bloks Variety packs	$59.98
3 Calabrese Sausages from Nuts.Com	$30.97
4 Cheese Brothers Chedar blocks	$49.16
Dinner	
5x Patagonia salmon	$70.00
2 packs of xl flour tortillas	$6.30
2 Cans of Mother Eart Dehyudrated Refri	$30.30
Minute Rice 28oz	$3.99
3 Cabot Monteray Jack Cheese Blocks	$11.07
32 oz of Rotini Pasta	$3.88
2 sticks of butter	$2.42
4.23 oz packet of Simply organic tomatoe	$14.95
6x Backcountry pantry	$77.94
Total	$366

Total for Trip

$733

Item		Price
Equipment		
Guidebook		$50.99
Fuel (900g)		$21.90
Bear Spray (2 pack)		$95.90
Wag Bags (12 packs)		$35
Aquamira Kit	x2	$29.80
Toilet Paper		$4.75
Dr. Bronner's Hand San.		$5.75
Dr. Bronner's Soap		$5.75
Carbon Travel Offset		
Driving Offset		$17
Housing		
Bozeman Hotel	x2/ 100	$200
Transportation		
1,244 x2 miles (there and back)	$4.00/gallon)	
Car with 16 miles to the gallon		
155.5 gallons of gas		$622
$0.61/mile maintence, subaru outback	x2488 Miles	$1,517.68
		-1000
Campsite		
$10 per person per night	x14 nights	$280
Food		$733
Total W/ 8% sales tax		2684.2536