

The background of the book cover is a photograph of a snowy mountain range. The top half shows a close-up of a snow-covered peak with a warm, orange glow from the setting or rising sun. The bottom half shows a wider view of a snow-covered mountain range under a clear blue sky. A small figure of a climber is visible on a snow-covered ridge in the lower middle ground.

# ALASKA CLIMBING

Joseph Puryear





# Alaska Climbing

By Joseph Puryear



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## Foreword

As a kid I was inspired by the tales of Jack London. His depiction of Alaska and the hardy souls pitting themselves against a boundless and unforgiving wilderness struck a chord in my dreamy adolescent mind. The heck with Klingons and transporters—Alaska, in my impressionable young mind, was the final frontier. I just had to go there. The call of the wild was strong and irresistible.

In 1987, at the tutelage of my mentor Mugs, Seth, Bob and I departed Salt Lake City in a destitute Econoline van, bound for the Alaska Range. We were on a mission to find adventure. Driving to Alaska is a rite of passage, one that we as aspiring alpinists, had to do. Fixing the van with salvaged parts and driving in white-out conditions on dirt roads were small lessons in adaptability and perseverance that were part of the upcoming adventure. When we finally saw the rosy ramparts of the Denali massif at dawn from the Talkeetna hill, we knew we had arrived. We tried to mask our fear and trepidation with bravado and moxie. We knew only too well that the high mountains of Alaska were a very unforgiving and harsh place. The Alaska Range is unique with its near arctic setting, Himalayan proportions and wild mix of geology. It is the place for alpine climbing in North America.

In Alaska I found the spirit that inspired Jack London a century earlier. With modern novelties making life much easier, the challenge wasn't merely to build a fire; rather it was to test oneself on the hidden ridges and facets of the peaks that define the crown of North America. From the international atmosphere of Denali's West

Buttress to the forbidding north wall of Mt. Hunter, climbers are able to find a route that matches their ambition and ability. The SuperTopo guidebook you are holding will motivate you and help select a climb. Use this book as a tool to inspire and plan. It is not a replacement for experience, nor will it be able to provide any when the going gets tough.

In 1995, after helping with several rescues on Denali, my partner Alex and I decided to give the Moonflower Buttress on Mt. Hunter a go. We skied to the base of the wall, roped up and started climbing. We never made the summit, yet the climb was the quintessential Alaska experience. We climbed through the night in the twilight that seamlessly blends into dawn, warmed our hands at belays and felt hunger as the few candy bars we brought were no match for the effort we exerted. Suffering strips away pretensions and our raw souls grew closer as friends. We had to trust each other, we had to believe in our intuition about the weather and, finally, we realized that although climbing is a frivolous pursuit, it does provide those who choose to explore it a great sense of self fulfillment.

May the following pages allow you to unleash your inner quest for adventure. It is all there. Go find it.

Be good, be kind, and be safe,

Conrad Anker

## Warning!

**Climbing is an inherently dangerous sport in which severe injuries or death may occur. Relying on the information in this book may increase the danger.**

When climbing you can only rely on your skill, training, experience, and conditioning. **If you have any doubts as to your ability to safely climb any route in this guide, do not try it.**

This book is neither a professional climbing instructor nor a substitute for one. **It is not an instructional book. Do not use it as one.** It contains information that is nothing more than a compilation of opinions about climbing in Alaska. **These opinions are neither facts nor promises.** Treat the information as opinions and nothing more. Do not substitute these opinions for your own common sense and experience.

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## Dedication

To Mom and Dad  
Thanks for your everlasting support  
and understanding.

## Acknowledgements

Foremost thanks go to Chris McNamara for seeing the vision and going for it. I'd also like to thank Conrad Anker, Jim Litch, and Joe Reichert for contributing their thoughts and expertise to help enhance this guide.

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The Denali Climbing Rangers and staff are to be commended for their excellent stewardship to these mountains.

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### Cover Photography

**Top: Sunset over Mt. Foraker.** *Photo by Joe Puryear*

**Main: David Gottlieb climbing along the Southwest Ridge of Peak 11,300.** *Photo by Joe Puryear*

### Cover Design

*by David Safanda, www.safanda.com*

**Page 2 Photo: Daniel Zimmermann leading steep ice on the North Couloir of the Mini-Moonflower.** *Photo by Joe Puryear*

**Page 6 Photo: Joe Puryear on Pitch 2 of Goldfinger, The Stump.** *Photo by Chris McNamara*

**Contents Page: The north face of Mt. Foraker.** *Photo by Joe Puryear*

All uncredited photos by Joe Puryear.

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## Introduction

Alaska is huge. At over 586,400 square miles it is 1/5 the size of the entire United States and larger than the next four largest states combined. It is no surprise that Alaska has one of the greatest climbing arenas on earth. The Alaska Range is one of the world's finest mountain environments and North America's premier alpine climbing destination. At 20,320 feet, the continent's highest peak, Denali is the central focus of the range. Because of the lure of climbing to this lofty point, a network of easy access has been created to allow climbers to explore the magnificent peaks surrounding Denali as well. This area, referred to as the Central Alaska Range, contains some of the biggest, baddest, and steepest peaks to be found anywhere. Expert climbers from around the world come here year after year to put their skills to the test. But the range is certainly not limited to the elite. An array of easier peaks and "back-side" routes makes it just as appealing to novice and intermediate climbers. Climbing amongst the splendor of these mountains is a delight for all.

The mountains of the Central Alaska Range contain incredibly diverse types of climbing all in a relatively close area. On the same day only 15 miles apart, climbers in the Ruth Gorge may be cruising up 10-pitch rock routes in shirt sleeves, while climbers high on Denali may be struggling up difficult ice and mixed terrain in desperate conditions. In these mountains there is something for everyone: high-altitude mountaineering, technical ice and mixed climbing, big wall climbing, alpine rock climbing, cragging, and ski touring. It is common for climbers to show up on the glacier with rock shoes and a chalk bag in addition to their ice tools and ice screws.

While it is true that the Alaska Range has a reputation for having poor weather and brutal storms, when the weather is good, the rewards of being here are immeasurable. The expansive glaciers, rugged summits, and pristine ridge lines will forever be impressed in your memory. And the huge Alaskan scale of these mountains continually astounds all that visit.

## Getting There

### Anchorage

The path to climbing in Alaska has changed immensely since the days of Belmore Browne who mushed dogs from Seward to reach the Muldrow Glacier months later. These days simply hop on a jet-liner to the booming metropolis of Anchorage, Alaska. A few adventuresome folk prefer to drive to Alaska each season. Pick up **The Milepost** magazine for the best driving beta available.

If you've purchased all of your food prior to the trip and do not need anything in Anchorage, it is possible to have a shuttle van pick you up at the airport and deliver you directly to Talkeetna. Make sure your flight schedule matches your shuttle company's pick-up schedule. The driver may be able to make a few short stops, but this should be arranged with the company in advance. Check the appendix for a complete list of shuttle services.

Another option is to take the **Alaska Railway** directly to Talkeetna or Denali Park. The train is definitely a pricey option, but it is a neat way to experience Alaska. Although the train goes directly to the Anchorage International Airport, this service is reserved for tourist groups only. To catch the train it is necessary to travel 20 minutes by bus or taxi to the Anchorage Depot. The **People Mover** bus is a good way to get around town.

With airline baggage limits so restrictive these days, many climbers (especially international climbers) find it easier to take a day in Anchorage to complete their expedition food and gear shopping before heading up to Talkeetna. A good option is to rent a car at the airport for a day and complete all your necessary shopping, then have the shuttle service come and pick you



up. An overnight stay at one of the youth or climbing hostels can also be arranged. Check out **Earth Bed and Breakfast** for the best climber friendly accommodations. Lori and Angel go out of their way to welcome climbers from all over the world.

While there are numerous locations to get supplies around Anchorage, the following combination of businesses will carry everything you need for an Alaskan expedition.

**Costco:** \$45 membership required. Good cheap source for staple foods needed in large quantities. Bulk batteries and cheap calling cards also available.

**Fred Meyer:** General grocery outlet and multi-department store. The Brown Jug liquor store is attached as well as a bank and ATM.

**Natural Pantry:** Health food and bulk food store.

**New Seguya:** Excellent source for specialty and gourmet foods.

**Alaska Mountaineering and Hiking (AMH):** Local dealer of climbing and outdoor gear and clothing.

**Recreational Equipment Incorporated (REI):** Climbing and outdoor gear and clothing.

If in search of some good food and entertainment in Anchorage, stop by either the **Moose's Tooth Pub and Pizzeria** or the **Bear Tooth Theatrepub & Grill**. Both are

fun and popular spots with great food and variety. Also the **Middle Way Café** (right next to REI) and the **Organic Oasis** both serve excellent vegetarian and vegan cuisine.

## Talkeetna

From Anchorage, follow Alaska Highway 1 north 35 miles to the junction of Highway 3 just east of the town of Wasilla. Turn on Highway 3 north (the George Parks Highway) and follow it another 64 miles to the Talkeetna Spur Road junction. Take a right and follow the Spur Road 14 more miles to Talkeetna. The drive takes about 2.5 hours. Talkeetna is a wonderful little community with a rich Alaskan history. Originally a railroad supply depot on the way to gold mining claims farther north, the Talkeetna townsite was established in 1919. The economy nowadays is largely tourist driven with many activities such as fishing, hunting, river-rafting, flight-seeing, and of course mountaineering. Talkeetna is a Den'aina Indian word meaning "place where food is stored by the river", or more poetically translated, "river of plenty".

Once in Talkeetna, there are a few more businesses for last minute shopping. Prices in Talkeetna are generally higher but supporting the local businesses helps the local small-town economy. Two very small grocery stores and a health food store may have some last minute goodies, but don't count on being able to buy food for a three week expedition. Climbing gear stores come and go in town, so it's best to check with your air service beforehand to see what the current situation is. Some of the air services may have some gear for sale or for rent as well. White gas or Coleman fuel can be purchased from the air services.

For eats, the **Talkeetna Roadhouse** is by far the best bet for breakfast, and they also serve fresh pastries, homemade soup, and sandwiches for lunch. Bring your laptop for a free wireless connection. **Mountain High Pizza Pie** serves gourmet pizzas and calzones. The **West Rib Pub and Grill** is a favorite climbers' hangout, with great beer and burgers. **Sparky's** is the old standby for a variety of take-out meals. The **Latitude**



The Talkeetna Roadhouse



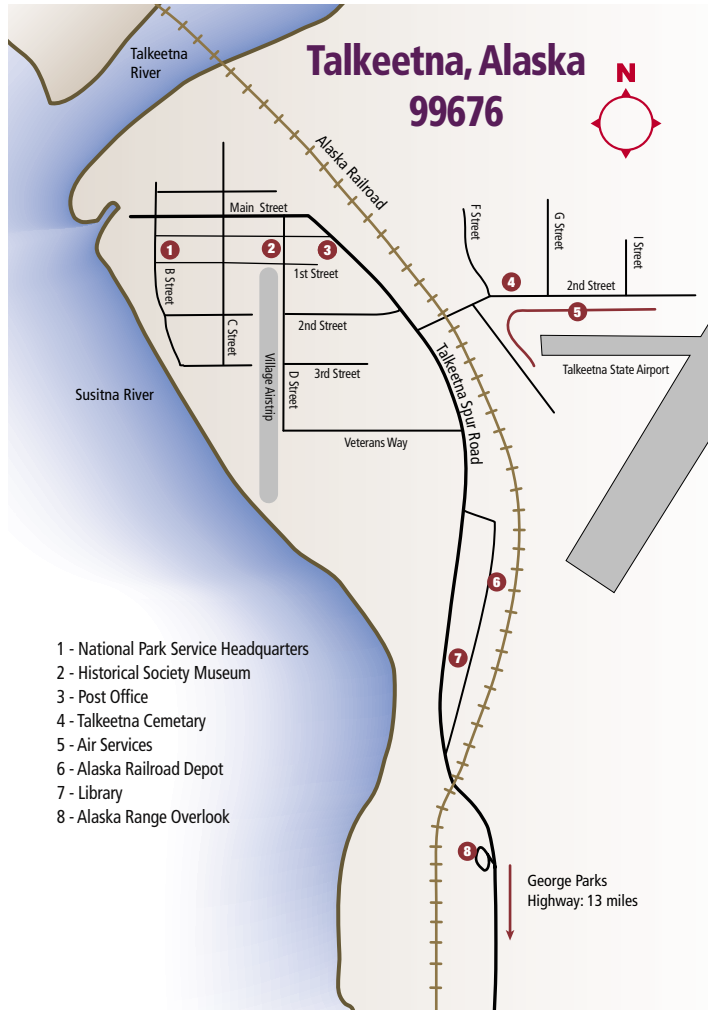
62 is a nice alternative for breakfast, lunch, and dinner.

After dinner, the **Historic Fairview Inn** is the local drinking establishment, often featuring live music. Much to the dismay of everyone, the Fairview was closed for the 2005 season, and its fate remains to be seen. **The West Rib** is also a great place to tie one on after (or before) a hard climb.

For overnight accommodations, check with your air service to see if they have a bunk-house or other lodging facility. Often, climbers are allowed to camp on the air service grounds, but be sure to check with your company beforehand. The **Talkeetna Hostel International** is located near the airport and is a good deal for climbers. **The Talkeetna Roadhouse** has convenient and comfortable rooms. **The Fairview** offers nice rooms, but can be very loud at night. **The Swiss Alaska Inn** and the **Latitude 62** also have rooms.

There is a bank located at the Talkeetna Spur Road junction (The 'Y'). There are no banks in Talkeetna, but there is currently at least one local ATM. Laundry can be done at **Tanner's Trading Post**. Public showers can be found here as well. A small public library offers free internet access. Several other establishments around town offer internet for a fee. Some air services offer internet access for their customers.

Other local attractions include the Talkeetna Historical Society Museum, which features an intriguing 12-by-12-foot raised relief wood model based on Bradford Washburn's Mt. McKinley map.



The Talkeetna Cemetery has a climber's memorial as a tribute to all that have died while in the Alaska Range. **The Talkeetna Ranger Station** is the single largest source of Alaska Range climbing information with their somewhat organized binders with route info and pictures. To really get your blood pumping, several gigantic Washburn photographs line their walls. An excellent indoor climbing wall can be found at the **Alaska Mountaineering School**. For a great view of the Alaska Range, follow Main Street west out to the river.

\*\*\* Bold faced businesses are listed in the Appendix.

## The National Park Service

All of the climbs in this book are located within Denali National Park. The Mt. McKinley National Park was created on February 26, 1917 for the protection and preservation of this unique natural resource. In 1980, the original park was designated a wilderness area and the much larger Denali National Park and Preserve was formed. Currently, all climbers attempting to climb Denali and Mount Foraker must pre-register with the National Park Service and pay a special use fee. Each member of the team is obligated to visit the Talkeetna Ranger Station in person at the time of their climb to pay the fee and have a pre-climb briefing with a climbing ranger. Climbers on other peaks in the range are encouraged to voluntarily register with the Park Service at the ranger station. In addition, all users of the park must pay the standard National Park entrance fee. Please refer to NPS Climbing Ranger Joe Reichert's article on page 28 for more details.

## The Mountains

In Talkeetna there are five licensed air services that can land climbers and their gear on the glaciers within the National Park. All of the air services are located at the Talkeetna State Airport east of town, although several of them have offices downtown. The air services use ski-wheel aircraft that can land and take off on both pavement and snow by protracting and retracting large skis. These small airplanes typically hold 3 to 5 climbers and their gear, although larger aircraft being used can hold over 10 people. Contact your chosen air services well in advance of your trip for more information and reservations. A list of these services can be found in the appendices.

Glacier landing locations and information is given at the beginning of each climbing area section. Air services may be able to shuttle parties between climbing areas. Check with your air service for availability. The North Side routes are not accessible by airplane and must all be approached overland. See the North Side section for further details.

## Seasons and Weather

*"In Alaska there are two types of clouds: Serious and Accumulating."*

- Karl Swanson, Alaskan resident and climber

The Central Alaska Range is the middle section of a great 500-mile arc of mountains that sweeps across southern Alaska. The mountains sit unobstructed some 130 miles from Cook Inlet and about 430 miles from the Bering Sea, where weather systems form. It's no wonder that the range gets some of the biggest and most feared storms on the planet. Combined with its proximity to the ocean, the huge uplift off the lowlands is a major factor to the brutality of the weather. The mountains rise steeply from the 1,000-foot elevation lowlands on the south and the 2,000-foot tundra on the north. Denali itself has an abrupt uplift of about 15,000 feet from the head of the Ruth and Peters Glaciers.

The Central Alaska Range mountains are also sub-arctic. Denali is located at 63° 04' 10.5" latitude; 35-degrees or 2,400 miles farther north than Mount Everest. This attributes to not only much colder temperatures than more equatorial ranges, but also a thinner atmosphere and lower pressures. Twenty thousand feet on Denali feels much higher and colder than 20,000 feet in the Himalaya or Andes.

It should be noted that the range creates a rain-shadow effect to its north side. Talkeetna, 60 miles south of Denali, averages 30-35 inches of rainfall per year. Lake Minchumina, 60 miles north of Denali, averages just 12 inches of rainfall per year. The north side glaciers and tundra generally receive much less snowfall and it tends to be drier and the snow less consolidated in the early season.

## Planning

The overall climbing season in Alaska is March through September, with most ascents occurring in May and June. Winter and off-season ascents are rare but not unheard of. If there is one thing I've learned, it's that there is not a particular

Storm clouds envelope Denali. Mt. Huntington is the pointy peak in the foreground. Photo by Brian McCullough

month that has better weather than others. Over the last ten years I have seen no discernable difference between the average number of good climbing days in March, April, May, June, or July. People try to predict monthly trends in the weather but every year is different. So how does this help? Instead of planning your trip around when you think the weather is best, plan your trip on when the temperatures are best for your climbing objective.

For Denali, it is no secret that the highest success rate is in June. This is a result of warmer temperatures rather than better weather. April and May can provide for great experiences on Denali, with fewer crowds, cleaner snow, and a generally more pristine environment, but chances of success go down because of the extreme cold at altitude. There have been years where there have been no summits in May until the last two days. July certainly has warm weather but the glaciers become so broken up that traveling on and even landing on the Kahiltna becomes problematic.

On the other hand, April and May are generally the best time to do the lower elevation technical snow and ice routes,

such as Ham and Eggs, Mount Dan Beard, Kahiltna Queen, and Mount Hunter's North Buttress. These routes typically fall apart and become very dangerous by June. Snow mushroom and cornice collapses are a clear and present danger. In general, early season ascents may have unconsolidated snow, more snow over rock, and brittle ice. As the season progresses, snow and ice conditions generally improve but natural rock and icefall become a problem.

Another consideration when planning a trip is the available amount of light versus dark. The joys of climbing in Alaska come when you are able to climb at all hours of the day and night without a headlamp. This usually comes in early May for non-technical snow routes where there is enough radiant light from the snow. By late May it becomes possible to climb technical routes and see to place gear at the darkest hours. As Alaska veteran Dave Anderson puts it, "The endless days of the Alaskan summer are the alpinist's ace in the hole."

For rock routes in the Ruth Gorge and Little Switzerland, the season typically starts early June when temperatures have warmed up enough to melt much of the seasonal snow off the rock and it is light and warm



enough to climb 24 hours a day.

Match your objectives within the suitable time frame. Your best bet is to come with lots of time and lots of objectives. Be prepared to take whatever the weather dishes out. Remember, storms create the unique environment in which we climb.

### Predicting

There are a few key weather observations that will help in predicting and preparing for storms and climbing days. The following are the typical storm events and weather systems that occur in the range.

#### General Storms:

##### Southwesters:

The typical storm starts in the western Aleutian Islands and tracks up the south side of the islands into the Gulf of Alaska. These storms tend to give at least 12 hours of warning, first by a sequence of high cirrus clouds approaching from the southwest. Winds increase and the sky will often turn a solid white color with a prominent ring around the sun. Eventually cumulus clouds will form and precipitation is imminent. One of the major warning signs of bad weather in general is a warming in temperature. These storms characteristically last about four days.

##### Bering Storms:

These storms originate in the Bering Sea to the west and are pushed north of the Aleutian Islands by high barometric pressure over Hawaii. They can be the fastest and most violent of all storms. Black clouds quickly appear due west, and it may be snowing within four hours. Although not always fast and terrible, a few of these have been the worst storms I've ever experienced, with up to eight feet of snow within 36 hours and sustained winds of 60+ miles per hour. The longest of these storms can last up to eight days.

##### The Eastern Flow:

The bane of the technical climbers wanting to get on a hard route, this weather pattern is the hardest to come to grips with. The forecast will generally call for precipitation everyday, and evil looking clouds will be constantly streaming in from the east, but long dry periods occur. The weather is never really stable, but is never usually violent either. Lenticular clouds will form and dissipate frequently. There normally will be long enough weather breaks to summit Denali or sneak up the Mini-Moonflower, but climbers waiting for that perfect forecast to get on the Infinite Spur





or Hunter's North Buttress will be sitting in base camp, watching much good weather go to waste. This weather pattern can last from one to three weeks.

#### North Flow:

If there is to be a flow of weather, the best is from the north. An arctic high that forms north of the range brings very cold temperatures but generally clear weather. Conditions up high can be extremely windy and frigid for the first couple of days. Look for plumes of snow blowing off the high peaks from the north to signify a possible couple days of clear weather. If the plumes change direction, watch out for a southwesterly.

#### High Pressure:

A high pressure system in the Gulf of Alaska and/or the Bering Sea generally brings clear weather and moderate temperatures. It lasts from one day to a week or more. Long weather windows also tend to occur when high pressure develops over the western Yukon or northeast and north central Alaska, holding back moisture from the sea.

#### The big peaks and localized storms:

Mount Hunter, Mount Foraker, Denali, and occasionally some of the smaller peaks, suffer from the infamous lenticular cloud cap formation. These airfoil-like clouds are created by the mountain itself and the prevailing winds aloft. The air around a mountain tends to be warmer than the mountain. Depending on its humidity or moistness, as winds collide with this air mass, it forces it over and around the mountain to create a lenticular cloud. It can be completely clear and cloudless everywhere else, except for this cloud. These clouds can form and dissipate within minutes and can be either quite violent or mild. Whiteout conditions normally exist within the cloud, and precipitation and winds can be intense. The caps usually form during the day but disappear in the evening when the air temperature around the mountain cools down.

#### Climbing (using the weather to your advantage)

The weather is by far the most talked about subject when climbing in the Alaska Range. Don't always trust the forecast given to you. It may be valuable for predicting general weather trends, but on a day-to-day basis it can be unreliable. This really comes in to play when climbing the smaller peaks in the range, or when making the summit push on a big route.

For the smaller peaks, the unpredictableness of the weather means that the climber must always be ready. Even though the forecast may call for snow the next four days, there just may be a 12-16 hour window of opportunity in there somewhere. This may be your one shot at the Southwest Ridge of Frances or Shaken, Not Stirred. (Remember to allow for snow conditions to settle out after a big dump.) Have your gear packed and check the weather, especially at night. For rock climbing in the summer, a weather window may come in the middle of the night.

For the larger less technical routes on Denali and Foraker, it is best to try and move on the lower sections of the route in periods of marginal to bad weather. Do not wait for perfect weather all the time or you will not get very far. Work on maneuvering your team into the highest possible position, then wait for the good weather to make a summit bid. On the flip side, don't push too high in bad weather or you may become demoralized and destroyed and at the first sign of good weather, you may find yourself going down. For big long routes such as the Cassin or the West Ridge of Hunter, climbers generally wait and sit tight for a big high-pressure system to be forecasted, and then move as fast as possible to utilize it.

Also be sure to consider and prepare for the range of temperatures that will be encountered. It can be downright broiling on the Kahiltna Glacier or in the Ruth Amphitheatre in mid-June on a sunny calm day. During hot days down low, the best strategy is to move during the cooler nights and sleep during the day. This assures better snow conditions, safer crevasse

crossings, and less risk of heat related illnesses. As you ascend higher in elevation, the schedule will eventually be reversed as nighttime temperatures become frigid.

Check the **National Weather Service Alaska** website for more information and current weather conditions: [www.arh.noaa.gov](http://www.arh.noaa.gov). Check out the **Alaska Mountain Forum** climbers' bulletin board for current conditions and trip reports: [www.alaskamountainforum.com](http://www.alaskamountainforum.com).

## Equipment

This book covers a wide selection of climbs and types of climbing. Packing gear for a three-week trip up the West Buttress in May will be substantially different than a one-week trip to Little Switzerland in July. Alaska in general requires high-quality pre-tested gear to combat the extreme winter conditions, temperatures, and winds. For late spring and summer ascents on snow and ice routes in Alaska, come prepared as if you were going to make a foul-weather winter ascent of Mount Rainier or an extended winter climb in the Canadian Rockies. Earlier season climbs in Alaska require an extra level of preparedness. For technical rock routes later in the season, come prepared at base camp for cold weather, but the gear taken on the climbs can be tailored to the current temperature and weather.

Listed with each climb are gear suggestions related to protection selection, rope recommendations, and other climb specific items. More equipment suggestions can be found below. A full equipment list can be found in the appendix.

## Glacier Travel:

Every route in this book requires climbers to carry standard glacier travel and crevasse rescue gear and be proficient at using it. Travel on Alaskan glaciers can be much more serious than on lower-48 glaciers and elsewhere around the world. High winds and heavy snowfall allow gigantic crevasses to be bridged with thin layers of snow. This combined with a lack of the freeze-

thaw cycle makes these unconsolidated snow bridges exceptionally dangerous. With the increased scale of the glaciers comes increased crevasse sizes. It is not uncommon for crevasse bridges to be 30 feet wide or more.

Either skis or snowshoes are obligatory. Skis are by far the safest and fastest means of glacier travel, but they can be difficult to use when roped up and handling a sled. It is best if each member of the rope team uses the same method of travel. Plastic sleds are commonly used to haul gear around. It's helpful to practice rigging and dragging a sled before arriving on an Alaskan glacier. Sleds are generally provided for free by your air service.

## Personal Gear:

### Boots:

For all of the snow and ice routes in this book it is recommended to use expedition-style plastic double-boots with warm high-altitude liners. For elevations higher than 14,000 feet or for early season climbs, fully insulated overboots should be available for use. Footwear is a bigger concern for climbers on technical routes. Overboots can make rock and mixed climbing difficult. Test your footwear thoroughly before getting on a big climb. For a route like the Cassin in June, I find I can get by with just good plastic boots and supergaiters. Luckily on this route, the more technical climbing ends at 16,700 feet. If you need to take overboots with you, they can be donned here for the summit bid. Make sure you can easily adjust your crampons to fit with or without your overboots.

For the summer rock climbing areas such as the Ruth Gorge and Little Switzerland, insulated leather boots are generally sufficient to get around on the glaciers and are easier to take up routes. Depending on the temperatures, rock shoes may need to be able to accommodate socks.

### Clothing:

For non-technical routes, a standard layering system works fine. Bring a high-quality down parka with attached hood. Water-proof breathable shell fabrics are

A climber on the South Buttress of Denali gazes across at a morning sunrise on Mt. Foraker. Photo by Joe Punyear

great for cutting out the wind and snow. For technical routes, I prefer the layer-over-the-top system. Over your synthetic base layer, a micro-fiber shell is worn. When conditions worsen, insulated synthetic layers are put on over existing layers. With this method it is much easier to regulate body temperature and your clothing tends to fit better and stay drier.

**Sleeping Gear:**

For routes up the big peaks and base camps, a sleeping bag rated to -20 to -30-degrees is necessary. Sleeping bag ratings are highly subjective. Ask around and test your bag out to make sure it is right for you. Most people use down bags which are lighter and more compressible but require more care and effort to keep dry. A -30-degree synthetic bag is just plain huge, but it will always keep you warm. Make sure it is roomy enough to accommodate boot liners, water bottles, camera, sunscreen, etc.

Two full-length sleeping pads are a necessity. Be aware that the inflatable type can be prone to popping, rendering them practically useless.

For more technical routes on smaller peaks, live by the adage "light is right." I often use a 10 to 20-degree down bag. If I

get cold, extra clothes and a hot water bottle help me through the night. To keep the pack size small, sleep on only one sleeping pad, often cut small, in addition to your pack, ropes, and other items.

**Group Gear:****Tent:**

A strong four-season dome tent for two or three people should be used for base camps and all non-technical snow and ice routes. A floorless circus-style tent makes a great cooking shelter. For technical routes requiring an overnight camp, a small footprint single-wall tent is best. If just out a single night and the weather is good, a bivy sack may be adequate.

**Shovels:**

Leave your plastic shovels at home. A sturdy aluminum shovel with a flat blade is the best for all-around use and building snow structures. A steel pointy garden blade can be useful for breaking up ice layers at the higher camps. Bring at least two shovels per tent. At least one snow saw is also a handy addition for building snow walls and igloos.



**Stove:**

A good, field-tested stove is mandatory. Your stove is your life. I recommend using a white gas model over a fuel canister model. They melt water faster, create less waste, and work better in the cold. White gas (Coleman fuel) is widely available and used in Alaska and on the glaciers. The MSR XGK model is an excellent all-around choice. Be sure to bring a good stove board to insulate the stove from the snow.

**Fuel:**

White gas fuel can be purchased at any department, hardware, or climbing store. Other forms of fuel, such as propane or butane canisters, are available at most of the climbing shops. Each season white gas is flown up separately to Kahiltna Base Camp by the air services. Climbers going here must buy their fuel from the air service in Talkeetna and acquire it at Base Camp. For other landing areas or if using canisters, check with your air service for current regulations for flying with fuel. Fuel canisters generally have tighter government restrictions and are more difficult to fly with.

Bring a minimum 8 oz. of white gas per person per day. White gas is typically sold by the gallon. This comes out to 16 person-days per gallon. A two-person West Buttress trip would do well with 2.5 to 3 gallons. When traveling by plane to Alaska with fuel bottles, separate the pumps or lids, rinse out the bottles, and put them in a stuff-sack with the lid off.

**Communication:****Citizen Band (CB) radios:**

CBs have limited functionality throughout the range, except in the Kahiltna Glacier area where they are commonly used. They provide only line of sight transmissions. Channel 19 is the most commonly used frequency and Channel 7 on the north side of the range. Airplanes generally do not monitor either frequency. Several air services will rent a CB radio or you can buy one for about \$65 at an electronics or large multi-department store. Check with your

air service for availability. Be sure to keep the batteries warm and carry a spare set.

**Aircraft radios:**

Although a federal license is technically required to use one, these are far more reliable than CB radios, allowing you to communicate directly with pilots. Aircraft radios should only be used in emergency situations or when scheduling a pick-up. They should not be used to check the weather or talk to other climbers. You will be talking on the same frequency the pilots use to relay their positions to other planes. Interfering with this vital communication, compromises their safety. Check with your air service for rental availability.

**Cell Phones:**

Cell phones have limited functionality with spotty coverage in the Alaska Range. They generally work above 14,000 feet on the south side of Denali or Foraker, and from the summits of more southern peaks that are closer to the road system. Do not rely on your cell phone for your only means of communication.

**Satellite phones:**

Sat. phones have slowly been decreasing in size and price over the years. This is by far the most reliable and useful form of communication in any remote region. Satellite phones can be rented from the following retailers:

Globalstar Satellite Phones: 866.728.7368, [www.spiritwireless.com](http://www.spiritwireless.com)

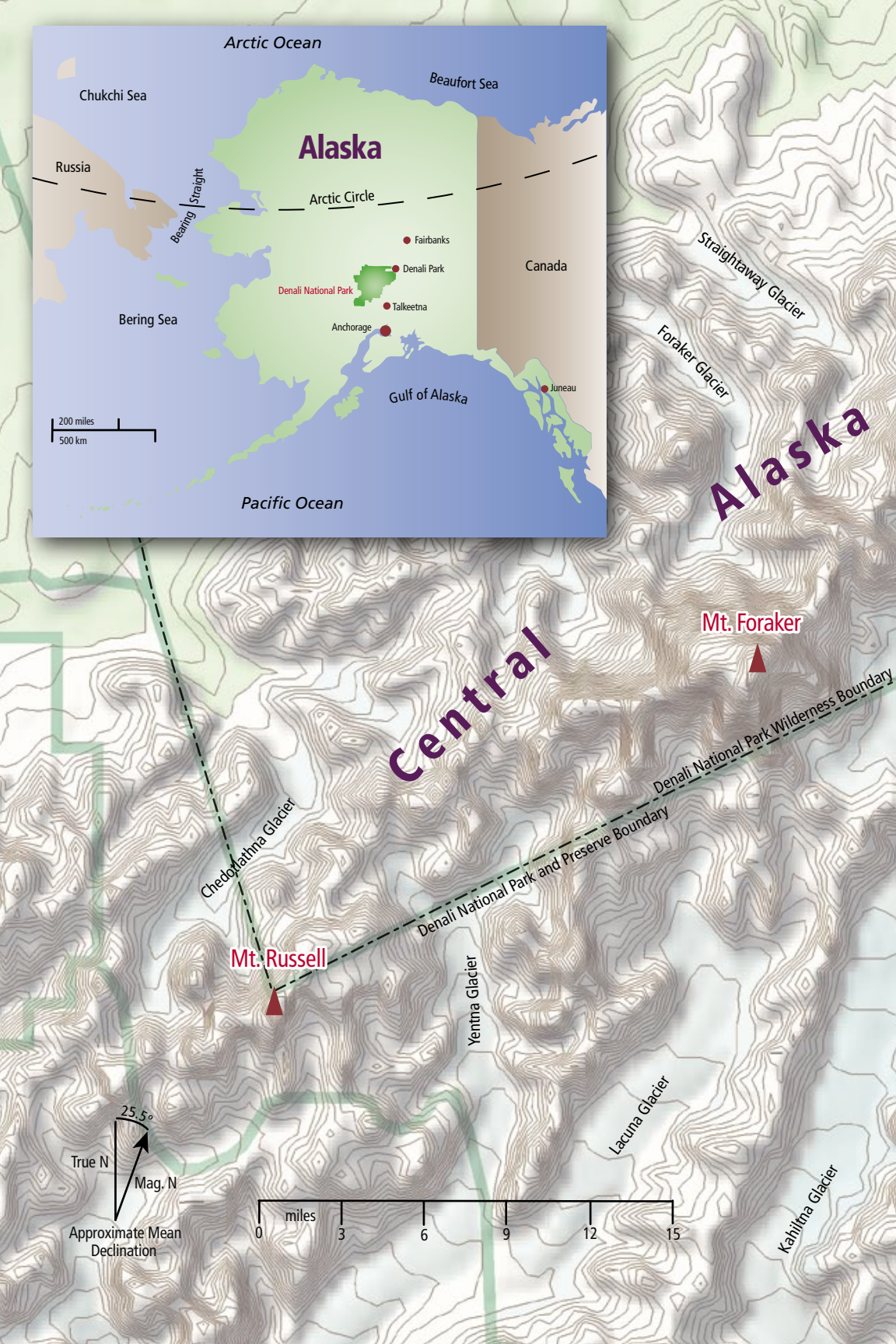
Satellite Communications of Alaska: 907.677.9699, [www.phonehome.tv](http://www.phonehome.tv)

A team of climbers approaching the Gateway to the Great Gorge of the Ruth Glacier.  
Photo by Joe Punyear

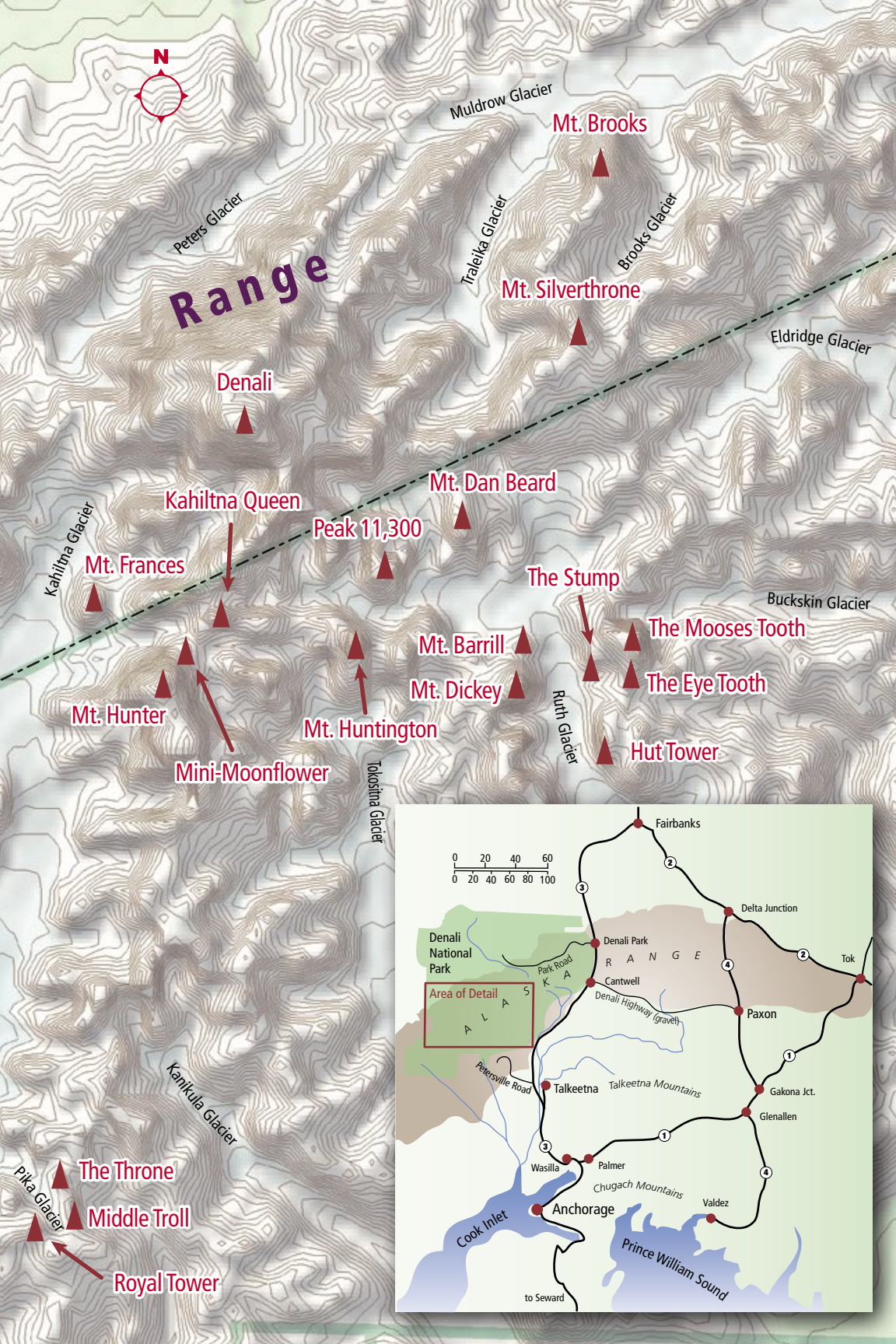












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## How to use this guidebook

This guidebook contains a selection of 30 routes of all different grades and types of climbing. The routes are grouped into six different sections, based on similar approach locations. Every climb in each section can be accessed from a common airstrip or approach. In addition to the 30 selected climbs, there are additional recommendations for other routes in each area, as well as proposals for new climbs.

### How these routes were selected

In choosing these climbs, I focused on routes that climbers actually climb or talk about climbing. Many of them are not only very popular routes, but important historically to the development of the range. None of these routes are sick horror-shows with no second ascents. These are all classic, repeatable routes by “mortal” climbers of all abilities. I’ve combined mostly first-hand information along with reports from contemporary Alaskan climbers to create these extensive route profiles.

### Choosing a route

As with any mountain range, it is certainly a good idea to start small and work your way up. Remember that even though a route may look doable on the topo, this is a big and remote climbing venue and there are many other factors to be considered. You may have climbed a big wall or two in Yosemite, but coming right up here to get on the Cobra Pillar might be ambitious. Remember, El Cap doesn’t require crossing a bad crevasse field to get to the base or descending 2,000 feet of serac-strewn, avalanche prone slopes to get off. But don’t let this necessarily deter you. With a few basic snow skills, routes like this can be accessible to anyone.

The two major climbing arenas are the

Kahiltna Glacier and the Ruth Glacier. This is where over 95 percent of all of the climbers are found. Luckily, within each area there are many different climbs available to test your mettle and see what it’s going to take to try harder routes. In the Ruth, try doing the Japanese Couloir on Barrill, and Mount Dan Beard, before trying Peak 11,300. Or warm up on the Stump and the Eye Tooth before attempting the Cobra Pillar. On the Kahiltna, try doing the West Rib of Denali, the Southwest Ridge of Frances, and the Mini-Moonflower, before attempting the Cassin. By starting on easier climbs, you will be able to ease into the rigors of Alaskan climbing. Study the route profiles and talk to other climbers to see if you have what it takes to attempt your chosen routes.

### Guided climbing

Climbing with a guide can be a very rewarding and enriching way of experiencing the range for a novice or intermediate climber. Climbers can worry less about the logistical preparations and focus more on learning and climbing. About a quarter of climbers attempting Denali use a guide service. Guides also commonly lead trips on Mount Foraker’s Sultana Ridge as well. Although not as common, small guided groups have been seen on nearly all of the peaks in this book. Several companies offer skills classes and multi-day seminars in the Kahiltna, Ruth, and Little Switzerland. Only six companies are authorized to guide on Denali and Forkaer. These and other companies are also allowed to guide elsewhere in the range. A complete list of guides can be found in the appendices.

### Route Profile Overview

#### History and First Ascent Information:

The detailed first ascent history (if known) is given, along with unique or important repeats.

#### Difficulty:

Each climb is assigned an overall commitment or seriousness grade in addition to individual difficulty ratings. See below for a discussion of the route ratings.



Cornice dangers exist on nearly all the routes. However, if a route has extensive cornice traveling, this is noted here.

**Elevation Gain:**

The elevation gain is given from different points for reference and to give an idea of the overall effort required. Elevations gains given are absolute and do not take into consideration ups and downs on the route.

**Season:**

The recommended months for climbing the route are given, in addition to the best time that has the highest success rate. If a best time is not given, the route is doable throughout the season given.

**Time:**

A “total time” is given to suggest the minimum range of time that should be allowed to complete the climb round trip from Talkeetna. Average approach times are given from different locations, depending on where a team may start. Times for both the ascent and descent of the route are given. All times given are based on an average party with good conditions.

**Strategy:**

This section includes general hints and tips on how to go about approaching and climbing the route.

**Specific Hazards:**

Besides the general hazards of crevasses and weather, this section tells of objective dangers specific to the route and where they occur. As mentioned above, cornices are a hazard on nearly all the routes and are not mentioned here unless they are a specific threat.

**Gear:**

Listed with each climb are gear suggestions related to protection selection, rope recommendations, and other climb specific items.

**Camps:**

At the beginning of each climbing area section is a recommendation for base camps for the area. Listed with each climb are camps and bivy sites specific to the route and its approach.



**Approach, Route, Descent, and Topo:**

Because of the non-technical nature of many of the climbs in this book, a route topo is not needed. Directions for these climbs, such as the West Buttress of Denali or the North Ridge of Mount Brooks, are based on a pictorial overview, map, and a detailed route description. This is also the case for a few of the straightforward technical routes, such as the West Face of Kahiltna Queen. On the rest of the technical routes, where a route description is necessary one is given. Otherwise, the detailed SuperTopo has all the information necessary.

**Route Ratings:**

For the overall commitment grade, Alaska Grades are only used for Denali, Mount Foraker, and Mount Hunter. Here it seems to apply well because of the high-altitude, cold weather, remoteness, and extensive length of the routes. Other peaks in the range can generally be compared to other peaks throughout North America, and the more standard overall seriousness grade originated by the UIAA is used, using roman numerals I through VII. Other common climbing ratings used include: YDS (5.0-5.14) for rock, A or C (A1-A5 or C1-C5) for aid or clean aid, and M (M4-M12) for mixed. Ice ratings are either given as Alpine Ice ratings (AI2-AI6) or as the degrees steepness of a pitch. Snow ratings are given as degrees steepness.

The following is a brief description of the **Alaska Rating System**. For a more detailed reference, read *The Organization of an Alaskan Expedition* by Boyd N. Everett Jr.

Grade 1: An easy glacier route that can be climbed in a day from base camp. Altitude is generally not a concern.

Grade 2: A moderate glacier route with little to no technical difficulties that takes several days to complete. The West Buttress of Denali and the Muldrow Glacier are a Grade 2.

Grade 3: A climb with moderate technical difficulties that takes several days. The climb may have extensive cornicing and knife-edge ridges. The Sultana Ridge on Mount Foraker is a Grade 3.

Grade 4: A climb with more sustained moderate to hard technical difficulties and higher commitment. The climb will take several days to complete. The climb may have extensive cornicing and knife-edge ridges. The West Ridge on Mount Hunter and the West Rib of Denali are Grade 4.

Grade 5: A climb with sustained hard climbing and a high level of commitment. Technical portions of the route may take several days. Bivy sites may be difficult to find. The climb may have extensive cornicing and knife-edge ridges. The Cassin Ridge on Denali is a Grade 5.

Grade 6: A climb with sustained hard technical climbing and the highest level of commitment. Technical portions of the route exceed 4,000 feet and will take several days. Bivy sites are infrequent and hanging bivies may be required. The climb may have severe cornicing and knife-edge ridges and retreat options may be poor. The Infinite Spur on Mount Foraker and the North Buttress of Mount Hunter are Grade 6.

## Topo Symbols

|                     |  |                                  |  |  |  |
|---------------------|--|----------------------------------|--|--|--|
| right-facing corner |  | face climbing or route to follow |  | direction of route or route instructions |  |
| left-facing corner  |  | hooking                          |  | off-route or other variation             |  |
| straight-in crack   |  | belay station                    |  | snow or ice ridge                        |  |
| groove/dihedral     |  | pitch length                     |  | technical ice and mixed terrain          |  |
| arête               |  | optional belay                   |  | snow and ice                             |  |
| chimney             |  | rappel                           |  | rock                                     |  |
| slab                |  | pitch or rappel length           |  |  |  |
|                     |  | degrees steepness of a pitch     |  |  |  |
| roof                |  | camp or bivy                     |  |  |  |
| ledge               |  | summit                           |  |  |  |

## Topo Abbreviations

ow = offwidth  
 lb = lieback  
 p = fixed piton  
 R = runout (dangerous fall)  
 x = bolt

## Metric System Conversions

1 inch = 2.54 centimeters  
 1 foot = 0.305 meters  
 100 feet = 30.5 meters  
 50 yards = 45.7 meters  
 To convert fahrenheit (F) to celcius (C):  
 $C = (5/9) * (F - 32)$

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## Safety, Survival, and the National Park Service

by Joe Reichert

In your hands are the most accurate route descriptions ever published for routes in these mountains. Having read this information you may approach one of these climbs with the same casual preparation that you might for a similarly rated challenge where the car is a 10-minute walk from the base. Please read on to understand some of the potentially deadly differences between a grade IV 5.10 A1 in the Alaska Range and one anywhere else (except possibly Antarctica).

Time in the mountains represents some of my most enjoyable and rewarding outings. The energy I feel through the excitement of a pending climb is beyond description; it is almost as refreshing to me to feel this energy exuded by so many of the climbers whom I speak with in Talkeetna at the start of their adventure. I encourage you to harness this ambition and use it, but use it wisely. Unbridled motivation is probably the leading cause of injuries and fatalities in the mountains. Be aware of the risks you are taking all of the time. Sometimes the approach or the descent will prove to be the “crux” of your technical route. Pay attention to conditions. These mountains are always changing and “bomber” conditions are the exception not the norm on many of the routes. Crevasses are everywhere! (And probably not very common at your home climbing venues). There is not a single route in this book that you could climb and not have the possibility of dying in a crevasse. Weather is a universal consideration. Just remember that you are much closer to the Arctic Circle up here and therefore, even though you will enjoy warmth in the sun, the possibility of debilitating cold is always present. Let’s

take a break from the touchy-feely stuff and read some of the facts about climbing in the Park and Preserve.

All users touching snow, ice or ground in Denali National Park and Preserve (DNPP) must pay a \$10 entrance fee. For folks attempting Denali or Foraker this is in addition to the \$200 special use fee required for a permit to climb on those peaks (so go break your piggy bank). Denali and Foraker aspirants must also register with the Park Service 60 days prior to departure from Talkeetna. I encourage climbers who know they want to attempt one of these two peaks (or both) to get your deposit in as early as possible, say January. The small deposit and early registration allows you greater flexibility to change dates, partners and mountains, assuming you are still 60 days out and your partners are all pre-registered. Call the Talkeetna Ranger Station for the most up-to-date information and to ask any questions you may have about registration and climbs in the Alaska Range (907-733-2231) e-mail to DENA\_Talkeetna\_Office@nps.gov and look at our web site at <http://www.nps.gov/dena/home/mountaineering/index.htm>.

Once in the park the old adage that you should “leave the area as you would like to find it” is no longer strong enough. I have been amazed by the trashy conditions some climbers are willing to endure as well as, subject others to. Whether it is Camp VI on El Capitan or the South Col of Everest, we all need to do our best to leave camps in cleaner conditions than we find them. In DNPP we are constantly experimenting with different techniques to maintain clean climber camps. All items packed in with you need to be packed out when you leave. Human waste needs to be off the surface of the glaciers so it does not contaminate drinking water. At high camp on Denali and all fly-in base camps, the NPS now requires you to pack your human waste out and dispose of it in Talkeetna. (Currently, the NPS provides Clean Mountain Cans (CMCs) for this purpose. Sign them out at the ranger station.)

Enough of the rules and regulations—lets get back to the more abstract. Through

Daniel Zimmermann contemplates his options as a massive avalanche drops 4,000 feet off the north face of Mt. Hunter.  
Photo by Joe Puryear





education the rangers in Talkeetna hope to prevent as many accidents as possible. Regardless of a person's technical climbing abilities, the first trip into the Alaska Range will always incur a large learning curve. From packing sleds to gauging the "Alaskan scale" of your surroundings, every returnee I have spoken with has reported being far better prepared for subsequent trips than they were for their first adventure in the range. Even with preparation and prudent judgment, accidents will happen. Therefore another goal of the Talkeetna rangers is to be proficient at mountain rescue. If your leader takes a whipper, bonks her/his head and is unconscious 103 feet above your belay, you will be able to call us on your satellite phone. If it is a clear blue day between April 20 and July 10 the NPS Lama rescue helicopter COULD be at your location the same day. This is a best-case scenario; there are many factors that could delay this timeline such as environmental delays, aircraft being used elsewhere, pilot down time, and mechanical problems. Remember that your partner is hanging and will most likely expire in

less than 30 minutes if his/her breathing is compromised. Self-rescue needs to be the first line of action for any team in distress. Your goal is to get the injured person stabilized and to a location from which they can be extracted, assuming that you have communication with the outside world. Technology for communication is developing rapidly. At the time of printing, satellite phones appear to offer the greatest chance for successful communication. Do your homework and decide what will work for you. Realize that if you choose not to carry the technology, search and rescue will not be initiated until you are overdue or another party makes a report. The NPS will help in any way that it can during an emergency, but remember that your emergency is not always the number one emergency for the NPS. Ultimately, it is your responsibility to make safe decisions and leave detailed written information with family, friends, and other climbers in the area when you depart for a climb.

The Washburn Route (aka West Buttress) on Denali deserves its own brief introduction because most Alaska



Range climbers will make this pilgrimage at one point or another. Deservedly, this spectacular route is the most visited in the range. While its technical difficulties are limited and the wilderness character compromised in May and June by human population, the West Buttress is never a disappointment. The intensity of the weather on Denali does not care which route you choose. When the winds are howling you can feel as isolated from the 50-plus tents around you as if you were climbing Mount Igikpak. Traveling the Washburn Route is a spectacular mountain experience whether your goal is the summit or to acclimatize for another line. While this is a good route to learn the ropes of expedition mountaineering, even it should be a later step in an apprenticeship that includes multi day 14,000-plus foot mountains such as Mount Rainier (especially Rainier in winter). The NPS has a ranger presence at base camp and the 14,200-foot camp in order to enforce the stewardship rules of the National Park as well as maintain an acclimatized team that can respond to emergencies higher on the mountain. Rangers are there to be of assistance. Do not hesitate to visit the camp and ask questions.

Allow several weeks for your Alaskan adventure and have several objectives. One objective should be to return with a satisfied memory of your mountain experience. This will be achieved even if all climbing attempts are thwarted by conditions. Use the information here to assist with your adventure. By no means fully rely on it for your safety. Just as a hand jam is a technique used in rock climbing, route-finding is a skill required for mountaineering. This skill is honed by looking at the entire portion of the mountain on which the route you want to climb lies. Your collective knowledge based on reading, photos, maps, reconnaissance from the air as you fly in, and observations on the approach will prove more beneficial to you on the climb than relying solely on written descriptions. You can not drop your memory. I have experienced a team

returning from a climb, proud of their success, yet bad mouthing the authors of a guidebook. They had photocopied and laminated the published topo and their interpretation of the terrain did not match that of the authors. Fortunately the climbers mistake in route-finding only cost them time and energy. The possibility haunts me that such a mistake could be fatal. Routes change; one person's "rising traverse" may be another's "ascend the left leaning gully" so study your route and treat every ascent with the preparation that you would make for a first ascent. Not only will this aid you with the climb at hand it will train you for the time in the future when you return to attempt that line that you spotted from you last route. Joe Puryear has climbed almost every route in this book. His fantastic memory, along with thorough research, has contributed to an identification of routes that offer classic lines to a wide spectrum of climbers. Please climb safely and let this book introduce you to the wonderful experiences that await you in the Alaska Range.

Joe Reichert  
Mountaineering Ranger  
Denali National Park and Preserve

A climber barely able to keep his tent snow-free. In a severe storm, continuous digging can sometimes last 12-18 hours. Photo by Mike Gauthier

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## Mountaineering Health

by Dr. Jim Litch

There are many factors that isolate us when climbing – vertical technical ground, distance, and unidentified location. Yet in the great ranges there are a number of others that periodically weigh in as well – intense weather, snow load and avalanche conditions, severe cold, darkness, high altitude, poor communication, and remoteness. Simply paging to and reading this health chapter in a route guide suggests awareness on your part that knowledge and preparation can make a difference. As in other remote ranges in the world, when one enters the realm of climbing in the Alaska Range, we are taking a big step toward accepting the heavy responsibility for our independent actions and decisions.

A rescue that we conducted during my time as a Denali mountaineering ranger made a strong impression on many involved. The incident unfolded after a fall when the leader pulled back on a large plate of ice on mixed ground in a long steep couloir along the Ruth Gorge. Some 15 meters out from the belay, the impact resulted in a cracked helmet, head injury and broken hip, though the leader rapidly regained consciousness. The belay anchors held, leaving his partner intact and uninjured. It took six hours for the belayer to lower his injured partner to the base of the snow fan below the couloir. He then dug a trench for the night's bivy in sleeping bags. Before dawn the party was hit by a large powder avalanche, but managed to dig out with the loss of equipment including one of the sleeping bags. They were located above an icefall in a small isolated cirque with nowhere to easily move that was entirely safe from above.

The following morning the climber negotiated the icefall and crevasses alone with the hope to discover a group with a radio. By chance, the climber found a

ski group in the Ruth Amphitheatre that afternoon, but they also did not have a radio. Exhausted, the climber spent the night, and returned alone to his injured partner, arriving the following afternoon just as the immobile partner was hit by another powder avalanche. On the fourth day since the accident, they moved further from the debris zone and that evening it began to snow, ending a period with good flyable weather. The two were hit by avalanches for the next three days while several feet of new snowfall accumulated down on the glacier below. On the eighth day the weather improved enough for rescuers to fly into the area and pick up the pair.

A request for rescue was eventually communicated after a string of events. On the fourth day after the initial accident, as the weather set in, a private plane sightseeing in the Ruth Amphitheatre spotted a message of “HELP” stamped in the snow by the ski party, and the pilot decided to investigate. The plane crashed while trying to land on the glacier in flat light. The aircraft ELT signal was received by the authorities and the National Park Service was notified, though the poor weather system had closed in sealing the area. The following day word of the climbing accident was sent, using the downed aircraft radio and picked up by a passing commercial jet and relayed to the National Park Service. Another two days passed before weather cleared enough for rescuers to arrive – on the eighth day after the initial climbing accident.

In the event of injury or illness in a remote setting, the decisions leading up to the incident and the immediate decisions that follow have a great impact on the final outcome. Should we need to evacuate, the difference between a really good day and a bad one ranges from clamoring aboard an aircraft after a several hour wait, to a week-long epic of starvation, dehydration, cold and impending doom from storm and avalanche. Before we begin tripping up a route, an appreciation of the uniqueness of the Alaska Range environment and sensitive preparation are within our sphere

Rappelling down Mt. Huntington's West Face. Photo: Joseph Puyear Collection





of control. When the health of a teammate or the lives of the entire party are caught in the balance, suddenly dozens of small, seemingly inconsequential decisions become fiercely monstrous. If we are going to keep monsters under our bed, my bold and adventurous three yearold son tells me, friendly monsters are better than fierce ones. We do create or chose our own monsters. What kind of monster do we wish to meet while climbing out here?

After periods as mountaineering ranger on Denali and Rainier, guide on 8,000 meter peaks in the Himalaya, rescue coordinator in Antarctica, climber/physician on some 3 dozen expeditions, and countless forays in my backyard ranges in Washington State and Alaska, I find that the unconventional is the norm. We need to approach new environments with an open mind and maintain our adaptability. There is little we can do in terms of first aid beyond basic steps to maintain the airway that actually can save a life on a remote Alaska Range climb. The opportunities to impact the outcome typically present much sooner—well before the accident actually occurs. Prevention of severe illness and accidents are critically important.

This chapter focuses on the prevention, early recognition and appropriate immediate care of health problems. Maintaining our health and recognizing problems early is where the emphasis is placed. There are plenty of other texts that lead the reader through volumes of first aid techniques. As a climber, it is better to attend to what you can carry with you. In your head. One of the aspects of climbing that I find most unappealing is that it is those that have survived an epic or near epic seem to absorb the attention and resulting praise. However, the lasting personal rewards are gained from being out there moving through the terrain with grace, sensitivity, and skill.

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### COMMUNICATION

Radio and telephone technologies have a powerful capability to diminish the remoteness that is so much a part of the Alaska Range. Certainly this has a potential negative aspect, given that we often travel to remote areas for a break from technology and revel in the isolation. Yet it is often transportation technology that allows us the privilege to visit remote areas. The potential for communication



technologies to facilitate evacuation after an accident, or obtain weather forecasts to avoid being caught by a storm cycle are not to be undervalued. The outcomes of many accidents in the Alaska Range have been significantly altered or entirely avoided by the availability of radios and cell phones. These devices may well be the most valuable emergency item that we can carry. Admittedly there several obvious limitations regarding this technology and these should not be ignored. However there are creative solutions, such as May Day relays over CB radio via climbers high on Denali. NPS mountaineering rangers are excellent sources of specific up-to-date information on the use of this technology in the Alaska Range.

### WORK CAPACITY AT ALTITUDE

Altitude adds another variable to an already complex mountain environment. The Alaska Range includes a wide range of elevation up to the 20,000 foot summit of Denali. At this altitude there is half the oxygen available than at sea level as a result of the lower atmospheric pressure. Even at about 14,000 feet, there is roughly one-third less oxygen available than at sea level. Above about 8,000 feet, any further gain in altitude forces our bodies to contend with a significant decrease in the content of oxygen in our bloodstream, and this stresses our body. In fact, we can expect a functional reduction in our work capacity and performance when climbing at high altitudes. Initially this requires a bit of trial and error to accurately predict our capabilities when climbing at altitude. As we travel higher, the situation continues to change by further eroding our physical capacity. This effect of altitude impacts all sojourners as a normal physiologic reaction, and is outside the scope of altitude illness.

### ALTITUDE ILLNESS

Altitude illness can further jeopardize our well being. Altitude illness occurs at altitudes above 8,000 ft and commonly presents with mild symptoms of acute mountain sickness (AMS) that include headache, plus malaise, lassitude, poor

appetite, nausea, vomiting, dizziness, and/or irritability. Essentially all climbers on Denali suffer from acute mountain sickness during their summit day if not earlier during the climb, depending on the rate of ascent. On lower peaks in the range, the incident of AMS is much less. Both incidence and severity are influenced by the altitude of the climb, rate of ascent to altitude, degree of excursion, and individual susceptibility.

AMS is not life-threatening, but ignoring it is. The illness may worsen over hours or days as dangerous collections of fluid develop in the brain. Increasing fluid in the brain (high altitude cerebral edema, or HACE) causes loss of balance, confusion, and hallucination. In addition, significant fluid in the lungs (high altitude pulmonary edema, or HAPE) may develop, resulting in shortness of breath while at rest and a further reduction of oxygen transfer to the body. If descent or oxygen supplementation is not accomplished within hours, coma and death may ensue.

### AVOIDING ALTITUDE ILLNESS

Gradual ascent to altitude over several days reduces the likelihood of acute mountain sickness because your body has time to adapt. Only rarely do climbers have this luxury of time, however. Many climbers simply accept the symptoms of AMS during a summit climb and factor this into the climbing plan.

If we were willing to be patient enough to achieve the same gain in altitude by gradual ascent over a week or more, our bodies would have time to adjust, and we would perform much better. However, many technical routes do not allow this strategy to be employed. Fortunately the technical routes described in the guide are at only moderately high altitudes below 14,000 feet. If a climber has not pre-acclimatize before tackling a route at very high altitude over 14,000 feet, ultimately a climber's only protection from the effects of a rapid ascent to high altitudes is to descend before these effects of altitude progress to life-threatening illness. Fine enough as long as all goes well and the party can keep moving. However, an unexpected stall, such

as a storm system, and severe altitude illness could develop. On a typical high altitude ascent in the Alaska Range without prior acclimatization, we are racing the clock.

Another strategy to consider is pre-acclimatization by first climbing a less committing route and spending several nights at high altitude, before committing to our target climb. This can contribute to our margin of safety in several ways. First, we push the threshold altitude for illness higher so it becomes less significant during the targeted climb. Second, the acclimatization will allow us to perform better physically, and third, the opportunity may present to, cache critical food and survival equipment for the descent of the target climb.

Medications are available to help prevent the symptoms of AMS. The most commonly used medications are acetazolamide (250 milligrams twice a day or 500 milligrams slow-release once a day), acetaminophen (325 milligrams up to four times a day), or aspirin (325 milligrams three times a day) at the start of a demanding climb above the elevation at which we are currently acclimatized. Acetazolamide is particularly useful as it actually improves oxygenation, has a positive impact on the quality of sleep at high altitude, and is very effective for periodic breathing that occurs during sleep. However, these medications do not protect against the development of serious altitude illness: HAPE and HACE.

There are a number of medications that have been suggested for use in preventing altitude illness. Acetazolamide is a weak diuretic, causing us to lose fluid through our renal system, which can become a significant factor during a long climb with limited availability of replacement fluids. Ginkgo biloba and garlic were both recently studied for use in the prevention of AMS and results have not been impressive (no or limited benefit beyond placebo). Nifedipine has been studied for use in prevention of HAPE and found to have a role only for persons with a history of recurrent HAPE. Such individuals would do far better with gradual ascent rather than relying on a

medication with limited effect for a life-threatening condition. Dexamethasone, a potent steroid, is generally best avoided as a prevention measure against AMS during ascent, so it may be utilized, if needed, for treatment of HACE along with descent. Extreme climbers have also used other performance enhancing drugs besides steroids, such as dexamphetamine (or speed), though these are extremely dangerous drugs that can kill.

There are several non-medication measures that in my experience can decrease the symptoms of high-altitude illness and maximize performance. They include the following:

- Begin a high-carbohydrate diet one or two days before the climb, and maintain this diet through the climb.
- Make climbing plans that take into account your decreased work capacity at high altitude.
- Reschedule the climb if you come down with an upper respiratory or other active infection.
- Avoid overexertion on the climb by maintaining a reasonable pace and not overloading yourself with nonessential gear.
- Drink enough fluids on the climb to offset increased fluid loss. Passing urine that is clear is a good sign that you're drinking enough fluids.
- Avoid nonessential medications and remedies. There are no shortcuts or quick fixes; they only make issues more complicated.
- Provide good ventilation for camp stoves used in confined places.
- Preacclimatize to very high altitude on a logistically straightforward training climb by sleeping for a few nights at a similar or higher altitude than the target climb.

## IDENTIFICATION AND TREATMENT OF ALTITUDE ILLNESS

Altitude illness is common and when climbing at altitude it is rare to completely avoid it. The critical point about altitude illness is to not let acute mountain sickness



progress to life-threatening HACE or to allow life-threatening HAPE to develop. It's not uncommon for climbers to dismiss their symptoms as other maladies and push on. If anyone in your party is experiencing even mild symptoms, hold tight and do not begin a technical climb until they improve. If already on route, do not ascend farther to sleep at a higher camp, and consider descent if your supplies or position are compromised. If the symptoms are worsening, the person should descend. Do not let your team member descend alone. The decision to descend must be made well before the climber's ability to perform work is further impaired or worsens further to lose the ability to walk down.

The red-flag symptoms that indicate the need for immediate descent include shortness of breath at rest; the coughing up of pink, frothy sputum; poor balance; confusion; or a decreased level of consciousness. Improved oxygen availability must not be delayed if any one of these signs is present. The seriousness of these signs cannot be overstated. Without additional oxygen, delivered by descent or supplemental oxygen death may occur

within hours. Waiting for a rescue without some form of supplemental oxygen is a desperate option. In HAPE, additional measures include maintaining the climber sitting upright and preventing physical exertion while the descent is conducted by the group.

Medications may help with severe altitude illness, but only rarely do they make a critical difference and thus they cannot be relied on. Each has benefits, but they can also cause harm if not used correctly. They include the following drugs: Acetazolamide is very safe, and is used to treat AMS and HACE. Take 250 milligrams twice a day or 500 milligrams slow-release once a day. The current medical standard is to advise that it should not be taken by people with a known intolerance to sulfa drugs, though the risk of a reaction maybe more theoretical than real. Side effects commonly include increased urine output and tingling of hands, feet and lips. Dexamethasone is safe when used for treatment of HACE while descending. It may also be used to treat patients with HAPE if you suspect HACE may also be present. The dosage is four milligrams every



six hours. The drug is dangerous if given as an aid to ascent. Nifedipine is a potentially dangerous medication in a mountaineering environment that is recommended by health professionals for treatment of HAPE. Severe side effects that bottom out blood pressure in climbers that have fluid depleted from the physical exertion of climbing

make this medication dangerous for use by climbers that lack specialized training and supplies. I suggest this medication be applied only in desperate circumstances when expertise and supplies are lacking.

### HIGH ALTITUDE COUGH SYNDROME

This is a persistent debilitating cough that develops following exposure to very high altitude usually above 14,000 feet. Not commonly a problem in the Alaska Range, with the exception of Denali.

### TEMPERATURE-RELATED HAZARDS

The extreme daily temperature swings encountered during a climb in the Alaska Range require constant vigilance to avoid overheating/sweating and cooling/stress. Climbers can learn to effectively guard against hypothermia/frostbite and heat exhaustion/heat sickness, and be prepared to treat the conditions should they develop. Like altitude illness, prevention of these conditions is critical.

#### Hypothermia

Hypothermia is a drop in the core body temperature to below 95 degrees Fahrenheit (35 degrees Celsius). Hypothermia can occur rapidly after a sudden event like immersion in cold water or a radical change in weather. It can also develop slowly if the body's



Mark Westman leading out on Mt. Hunter's North Buttress. Photo by Joe Puryear

metabolism isn't adequate to meet ongoing environmental exposure.

Hypothermia occurs both ways in the Alaska Range. A person who falls into a crevasse while lightly dressed for a sunny mid-afternoon glacier crossing will be at risk if not extricated quickly. More slowly but just as surely, hypothermia can affect a climber who has eaten little food while climbing through the day with a heavy pack, leaving the body with lessened ability to produce heat as the sun becomes covered by clouds, a breeze kicks up, and rain begins.

Prevention is a matter of minimizing excessive heat loss and ensuring adequate heat production. This is achieved through:

- proper choice and use of clothing and shelter
- staying dry
- adequate nutrition and hydration
- avoidance of overexertion
- anticipating changes in weather conditions.

Hypothermia is progressive. Symptoms of mild hypothermia include a loss of judgment and of fine-motor coordination. The patient shivers to keep warm. This is readily reversible in the field. Patients can warm themselves once they are protected from further heat loss and are given rapidly absorbed high-energy food. A reasonable initial maneuver is for the patient to huddle with other members of the party behind some form of wind barrier, gaining warmth from the teammates. Early recognition and treatment of mild hypothermia is critical to avoid the progression to profound hypothermia.

As profound hypothermia sets in, shivering ceases and the patient becomes confused, with loss of coordination progressing to apathy, stupor, and coma. People with profound hypothermia cannot warm themselves, and in the field it is very difficult to provide adequate sources of heat. The initial step is to prevent additional heat loss by providing the climber with wind protection, removing wet clothing, and applying pre-warmed

insulation (including a ground layer). It's essential to provide warming by applying heat packs or hot water bottles next to the patient's body, cuddling with the patient inside a sleeping bag or bivy sack, or both. Begin these procedures as soon as possible. If the patient is in a stupor or unconscious because of hypothermia, use gentle handling to avoid triggering an irregular heart beat. Do not assume that a hypothermic (cold) patient has died; continue the rewarming process.

### Frostbite

Frostbite is a localized area of frozen tissue. It occurs most commonly at the end of extremities and uncovered areas during exposure to subfreezing temperatures. Especially vulnerable are parts of the body that are in contact with metals or liquids or that have been frostbitten in the past. The risk of frostbite increases with extreme cold, high winds, high altitude, dehydration, and overexertion. Wearing tight clothing or footwear, or using alcohol, tobacco, or other drugs, also increases the risk.

Superficial frostbite results in pale, cold skin with underlying tissue that is pliable and soft. Treat with skin-to-skin contact or by immersion in water that is just warm to the touch of the caregiver's elbow (104 to 108 degrees Fahrenheit). If the frostbite produces blisters, the patient should be evacuated to receive further treatment. If the frostbite is on the foot, the climber shouldn't walk, or at least minimize walking, unless their survival depends on it.

Deep frostbite involves the skin and deep structures that become hard and nonpliable. The decision to thaw deep frostbite depends on the situation. Rewarming requires both proper technique to minimize tissue damage and use of a strong painkiller or narcotic. To prevent further damage, don't use the affected part after thawing. The decision to thaw in the field is a complex one that depends on the availability and timeliness of evacuation.

Corneal frostbite is rare but can occur in extreme cold and high winds. Irreversible damage may occur, requiring a corneal transplant. If you travel in harsh conditions, wear goggles and cover exposed skin.

## Heat Sickness, Heat Exhaustion, and Dehydration

These conditions can disable even a strong, fit climber. They are common anywhere climbers face frequent and rapid extreme changes in temperatures during a sustained period of physical activity. The conditions result from a lack of attention to basic nutrition, hydration, and regulation of body heat by adjusting clothing layers. Each of these ailments points to its own cure. Heat sickness (dangerous overheating) requires urgent rapid cooling. Heat exhaustion warrants rest and high-energy food. Dehydration and electrolyte imbalance requires the drinking of water containing reasonable concentrations of salts (sodium and potassium) and sugar.

The symptoms of these temperature related conditions overlap with those of altitude illness. Sorting out these potentially dangerous conditions can be difficult. Carefully evaluate a patient's symptoms and closely follow the responses to initial therapy while maintaining a suspicion that altitude sickness is involved. More than one illness may be occurring at the same time.

## SNOW-BLINDNESS AND SUNBURN

Both snow-blindness and sunburn result from direct tissue irritation by ultraviolet (UV) rays of sunlight. The UV dose is dependent on the intensity and duration of exposure to sunlight, which increases with altitude. Although both ailments may occur throughout the year, they are more common in the sun-intense spring and summer.

For sunburn, barrier methods are very effective, such as light clothing to cover extremities. Apply sunscreen (SPF 15 or higher) or zinc oxide paste frequently to sun-exposed areas when you are perspiring. High-quality sunglasses filter out most or all UV light and combined with side shields they offer extremely effective eye protection.

## PREEXISTING VISUAL REFRACTIVE ERRORS

At altitudes found on in the Alaska Range, contact lenses are tolerated without the difficulties that are common with use at

extreme altitude. Corrective eye glasses can rapidly become a major hassle in poor weather conditions and may lead to serious problems if required for adequate vision. Prescription goggles are available for those who are dependent on corrective lenses to see adequately.

Surgical corrections of near-sighted refractive errors, radical keratotomy (RK) and laser keratectomy (LASIK and PRK) are popular corrective procedures. Although RK can lead to visual changes at altitudes above 9,000 feet, typically approximately 24 hours of altitude exposure at 14,000 feet are necessary for significant visual problems and are fully reversible at sea level. LASIK and PRK are more stable procedures and do not result in visual changes at high altitude below approximately 17,000 feet, and typically visual problems don't occur until approximately 27,000 feet.

## PREEXISTING MEDICAL CONDITIONS

The sustained strenuous climbing in harsh environments can precipitate a variety of medical problems. The related dehydration can seriously impact blood levels of particular medications and limit oxygen delivery in the body. If you have a condition that limits your activity at home or that is managed with essential medications, check with your doctor before venturing into a remote area like the Alaska Range. And bring enough essential medications with some extra, so it may be stored in at least two locations; i.e. some with you during the climb and some left stored at base camp.

## ACCIDENTS/AVALANCHE/TRAUMA

It is difficult to generalize about accidents in the Alaska Range. Poor sensitivity regarding varying snow conditions and weather appear to be significant factors.

Avalanches are deadly beasts that must be avoided at all cost. Once caught by an avalanche, survival depends on severity of injuries that occurred during the avalanche and duration of burial resulting in suffocation. Extrication times of less than 15 minutes result in more than a 90 percent survival rate. This drops to less than 30 percent by about 30 minutes. However,



even relatively small avalanches can lead to fatal falls. Once again, avoidance is critically important.

Crevasses are persistent threats along glaciers in the range. Injuries result from falls, entrapment, sudden hypothermia, and being struck by falling ice. Snow-covered glaciers in the range are suspect for surface failures that range from punch holes to massive bridge collapse. Skis and snowshoes distribute weight but are not complete protection. Roped travel and probing campsites are routinely employed techniques to minimize the risk of accidents.

Weather in the Alaska Range commonly moves in quickly and dramatically. For climbers, weather can be a critical factor contributing in a severe injury or accident. Think twice before pushing a weather window that could leave you stranded on exposed terrain with limited supplies and protection. Learn the local weather patterns before feeling overly confident on reading the weather signs. This takes time, while most climbers are relatively new to the Alaska Range.

Climb using your brain, not only your legs—this is a real challenge, particularly on long climbs. Maintain an alert rational perspective rather than a mechanical routine. Technical climbing in the Alaska



Chris McNamara leading the first pitch of the Cobra Pillar, starting a 15 hour and 10 minute speed ascent of the route. Photo by Joe Puryear

Range is a continuous cycle of observe, assess, act.

Climb well. May your thermos never empty of warm drink, and enjoy this special place!

Jim Litch is a high-altitude and travel medicine specialist and former Denali Climbing Ranger.

# Kahiltna Glacier



The 43-mile long Kahiltna Glacier is the largest glacier in the Alaska Range. Over 1,200 climbers visit this mighty glacier each year. With access to Denali, Mount Foraker, and Mount Hunter, it isn't hard to understand its popularity. In addition to the giants, there are a plethora of smaller peaks, from snow walk-ups to technical test-pieces. Because of the number of people and the presence of the National Park Service, there is a large network and community to assist your climbing experience. While this may turn some climbers off who are looking for a more solitary adventure, for most it is this arrangement that keeps bringing people here to push their own limits. Regardless, the Kahiltna Glacier is one of the most incredible and beautiful climbing venues on the planet.

## Getting There

There are two options for reaching the Kahiltna:

## Air Travel

Nearly all parties fly into Kahiltna Base Camp with a licensed air service out of Talkeetna. The flight takes about 40 minutes one-way. This is used to access every climb in this section.

Some parties may want to consider landing at the toe of the Southeast Ridge of Mount Foraker, near 6,500 feet, for attempting the Infinite Spur or even Mount Hunter's West Ridge. This is a quiet out-of-the-way spot, but it lacks the support net of the Kahiltna Base Camp and is farther away from good moderate warm up climbs. Not all air services will land or pick-up here so be sure to check with them first.

## Petersville Road

One or two parties each year walk into the range from the Petersville Road. The trip is best made in early season (before May 1) when snow is covering much of the brushy terrain on the tundra and the



rivers are frozen to allow straightforward skiing. In May and June, traveling in these lower regions becomes difficult due to the inherently bad snow conditions and break-up of the rivers. Later in the season, it is easier to stay above the valley floors to avoid the thick brush and raging rivers. Expect to take 7 to 10 days for the trip to Base Camp.

There are two ways to go about doing this. At the town of Trapper Creek on the George Parks Highway (mile 114.5), turn left on Petersville Road. Drive this rough road 40 miles to a parking area at Cache Creek. Descend Cache Creek, then head north to the toe of the Kahiltina Glacier. Follow the Kahiltina to the Southeast Fork and Base Camp.

The other route involves traveling to Little Switzerland, down the Pika Glacier, then up the main Kahiltina Glacier. This avoids many of the difficult icefalls and heavily crevassed sections of the Kahiltina, but is not as straightforward. This may be a better late-season approach. Check the Little Switzerland section for approach suggestions.

### Kahiltina Base Camp

Kahiltina Base Camp is located at 7,200 feet on the Southeast Fork of the Kahiltina Glacier. Also referred to as Kahiltina International Airport (or simply KIA), this is the fly-in point for over 90 percent of the people that climb in the Alaska Range. It isn't hard to imagine the veritable circus that can form here. With climbers from all over the world, each with their own agenda and opinion on how things should be done, things can sometimes be a little hectic. At the same time, this is an awesome little glacier community of people and a unique chance to learn and make friends. The camaraderie and experience that can be gained is immeasurable.

This is the main base camp location for all of the climbs in this section. The camping spots are located on the hill just north of the airstrip. During the height of the season, several pre-dug campsites exist. Remember, this is a very busy small airport and the noise pollution can be severe. If planning on staying for a while, it might be

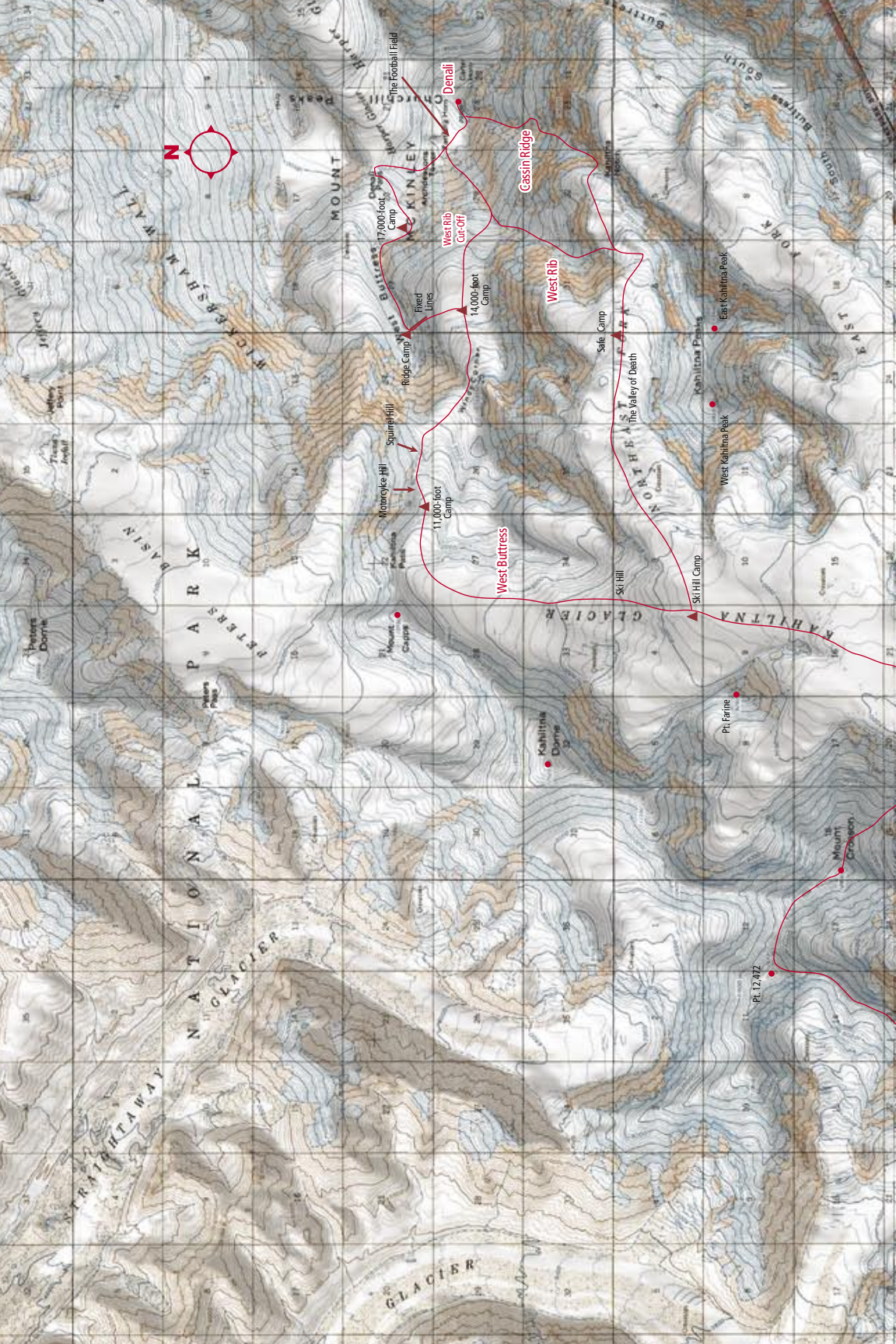
preferable to set up camp well away from the busy airstrip. Camp at least 50 feet away from the Park Service and Base Camp Manager's tent.

For any climbing trip here, it is recommended to bring an extra week's worth of food and cache it in the snow at Base Camp. Dig your cache at least three feet deep to the top of the cache. Place a minimum eight-foot wand or flag (above the snow surface) on the cache to mark its location. On the wand should be your issued Park Service permit sticker or a tag noting your team name and your fly-out date. Don't forget to pick up your cache on your way out. All of the caches are placed in one general location in the Base Camp. Check with the NPS Ranger before placing your cache.

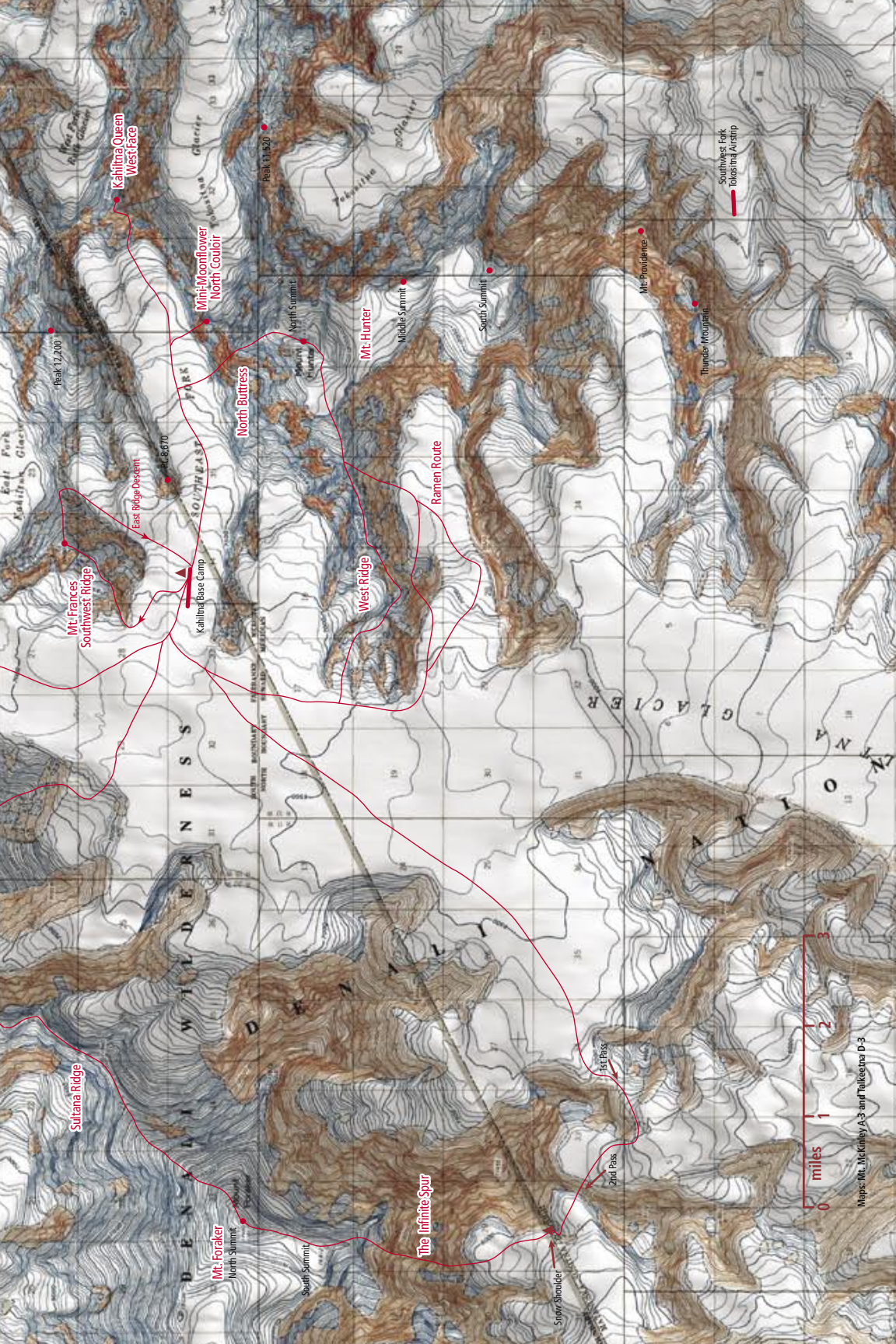
### Base Camp Essentials

1. The Base Camp Manager is in charge of all of the airport operations. You must obey and follow her/his commands and instructions at all times. She/he is in charge of your safety as well as the safety of the pilots and other glacier tourists.
2. As soon as you land, help your pilot unload your plane and immediately clear your gear and yourself from the runway. Be on the lookout for planes landing and taking off.
3. Check in with the National Park Service and give them your Base Camp Card issued to you by your air service. They will provide you with instructions on where to camp, where to place your Base Camp cache, and how to acquire fuel and sleds.
4. Camp only in the designated area around the Base Camp. Do not camp near or at the end of the runway. Do not walk across the runway unless instructed to do so by the Base Camp Manager.
5. Use only designated latrines and pee-holes for human waste. There are generally two pit toilets located on the far west side of camp.
6. Help keep the runway and the camp clean by removing all of your garbage and any other trash you come across.









Sultana Ridge

Mt. Frances  
Southwest Ridge

Kahilua Queen  
West Face

Mt. Foraker  
North Summit

Mini-Moonflower  
North Couloir

West Ridge

Mt. Hunter

The Infinite Spur

Ramen Route

Snow Shoulder

2nd Pass

1st Pass

South Summit

Middle Summit

North Summit

Mc. Providence

Thunder Mountain

Southwest Fork  
of the Rainier River

0 miles 1 2 3

Map: Mt. McKinley A-3 and Takeana D-3



## Cassin Ridge

**Difficulty:** Alaska Grade 5, 5.8, AI 4

**Elevation gain:** On route: 8,000'. From Kahiltna Base Camp: 13,100'

**Total time:** 16-24 days

**Approach time:** From Kahiltna Base Camp: 10-18 hours.  
From the 14,000-foot Camp via the Northeast Fork: 9-16 hours; via the West Rib: 8-15 hours

**Climbing time:** Up: 3-7 days. Down: 1-2 days

**Season:** Mid-April to late-June, June is best

The Cassin is the quintessential technical climb of the Alaska Range. It is an elegant line that perfectly splits the enormous south face of the biggest mountain on the continent and is one of the most sought after climbs in the world. Many consider it a trade-route of the range, but judging by the actual number of ascents it has seen, it is still a modern testpiece and a lasting tribute to the visionary first ascensionists. The actual climbing is not that difficult by present technical standards. But the complete package of a long and dangerous approach, 8,000 feet of sustained climbing, high altitude, arctic cold and storms, and difficult retreat make this route a serious

endeavor. The quality of the climbing is absolutely classic. Bradford Washburn wrote that the route had “unequivocally excellent climbing from start to finish.” Both the rock and the ice on this exceptional route are superb.

FA: July 19, 1961; Riccardo Cassin, Luigi Airoldi, Luigi Alippi, Giancarlo Canali, Romano Perego, Annibale Zucchi.

### History

It was only time before this amazing line was sought out. Washburn, the master of finding potential new lines in the Alaska Range, divulged in 1956 that this ridge was the “last and probably the most difficult and dramatic of all potential new routes on Mount McKinley.” So the call went out to alpinists around the world. In 1961 Riccardo Cassin of the Italian Alpine Club answered the call and in July of that year he and his team of six made international climbing history. Their climb was the 23rd ascent of the peak, but only the fifth route to be climbed. Except for Cassin and one other member of the team, it was their first trip outside of Europe. None of them was quite prepared for the extreme cold that the arctic weather brought. But they were prepared for the technical difficulties of the ridge, both with modern gear and talented





Mark Westman at 16,700 feet on the Cassin. Photo by Joe Puryear

abilities. The climb was done expeditionary style, fixing ropes and hauling loads. Because of Washburn's suggestion, the team started the climb from the East Fork of the Kahiltna, an approach rarely used these days. They started the climb in late June and over the course of three weeks they had shuttled their gear and established three camps on the route. Throughout their climb they were battered by gale force winds and heavy snowfall, but the persistent Cassin and his team continued upward progress. The six climbers left their final camp at around 17,000 feet on the morning of July 19. They climbed through bitter cold conditions for 17 hours until they finally reached the summit.

All of the team suffered from cold extremities. They were only using alpine gear designed for the Alps. One team member, Giancarlo Canali, suffered major frostbite and his swollen feet did not fit into his boots. Through much teamwork and tenacity, they escorted the injured climber down. At one point, Canali and his rope-mate slipped, but Cassin stopped them with his ice axe. Lower down, another teammate slipped and the belay did not hold, but Cassin was able to grab the rope

with his hand and stop them. Toward the bottom, Cassin was completely buried in an avalanche and he lost both his crampons, but continued down unharmed. The team eventually all made it to the safety of the glacier and was soon flown back to Talkeetna. For this epic ascent, the climbing community afterwards graciously bestowed the name Cassin to this "great central bulge" of Denali.

The second ascent of the Cassin was made in May of 1967 by a Japanese team. The Japanese made two important contributions to the route. One was the opening of the Japanese Couloir on the western flank of the lower buttress. This straightforward ice couloir bypassed a lot of more technical and meandering climbing. The Italians actually traversed into this couloir near its top, but avoided the ice and opted for the rock on its side. The entire couloir was overlooked by the Italians because at the time of their climb steep ice was deemed much harder than fifth class rock. The Japanese Couloir is now the standard route of ascent. The Japanese party also bypassed the third rock band above 16,700 feet, deviating from the ridge crest, but providing a much easier

and faster line. This too has become part of the standard route. The Japanese used a different approach for the climb as well. They headed up the Northeast Fork of the Kahiltna, which is much faster but much more perilous. This is now the standard approach for the climb.

The Northeast Fork of the Kahiltna became known as the Valley of Death after a mysterious disappearance and a close call in 1980. A Canadian team of four people ventured up the Northeast Fork in July of that year. The team disappeared and an extensive and expensive search ensued. Their bodies were never found. Earlier that year on June 5, four climbers were camped underneath the Kahiltna Peaks when a massive avalanche broke off from above. The truck-sized debris came within six feet of their tent, but everyone escaped unharmed.

In the summer of 1976, a single bold and visionary climber soloed the Cassin. Little is known about Charlie Porter's climb, but his accomplishment was certainly ahead of its time. It is written in the 1977 *American Alpine Journal*, "With his usual reticence, Porter has given us no details." He apparently made an impressive 36-hour single push from the top of the Japanese Couloir to the summit. Another notable solo started on June 4, 1991. The legendary Mugs Stump left the 14,000-foot Camp in the afternoon and descended (partly on skis) the West Rib to the base of the route. He then climbed the route in a mere 15 hours and returned back to his camp in a record setting 27 and a half hours round trip.

In March of 1982, three competent Alaskan climbers not only made the first winter ascent of the Cassin, but the second winter ascent of Denali as well. The ascent was completed by Jonathan Waterman, Roger Mear, and Mike Young. Waterman stated they wanted to "push the limits by climbing alpine style on a technically difficult route in subzero conditions." On March 7, after eight days of climbing they stood on the top, unacclimatized and exhausted, but setting a standard for winter

alpinism that few will ever match.

Today there are still the remains of tattered fixed ropes here and there. Near 18,000 feet there are old bags of pitons and ice screws and piles of fixed ropes. An admirable cleanup project conducted by the park rangers in 1996 cleaned up 200 lbs. of fixed ropes and trash out of the Japanese Couloir and off Cassin Ledge. Luckily most climbers have currently adapted an alpine ethic for climbing this route. Each year dozens of prospective climbers register with the NPS to do the Cassin. Only about 10 percent actually step foot on the route, and even less complete it. Climbers still find it very intimidating and most dislike the prospect of traveling up something called the Valley of Death. However, many climbers consider an ascent of the Cassin a career defining accomplishment.

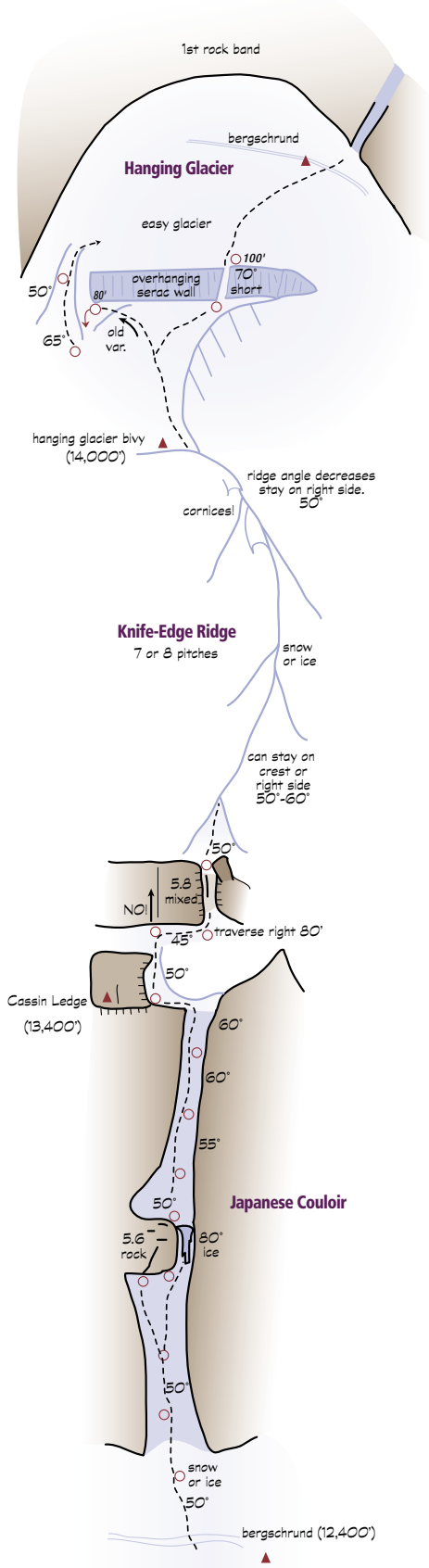
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### Strategy

The route is no longer commonly done expedition style. Most parties acclimatize on the West Buttress route, and then wait for a spell of good weather to attempt the Cassin alpine style. Plan for a minimum three-week trip in the range. This allows for four to five days to reach the 14,000-foot Camp on the West Buttress. Seven days can be spent acclimatizing on this route by making trips to either the 17,000-foot Camp or the summit. Depending on the party strength and conditions, three to seven days are used to climb the route and descend back to the 14,000-foot Camp. One day will be needed to descend back to the airstrip. This allows one to five storm days. A longer trip will allow more leeway for choosing a good weather window. Some parties have taken over four weeks total to climb the route. I've seen too many fit and qualified parties run out of time because they thought they were going to blitz the route. Don't underestimate Alaskan weather.

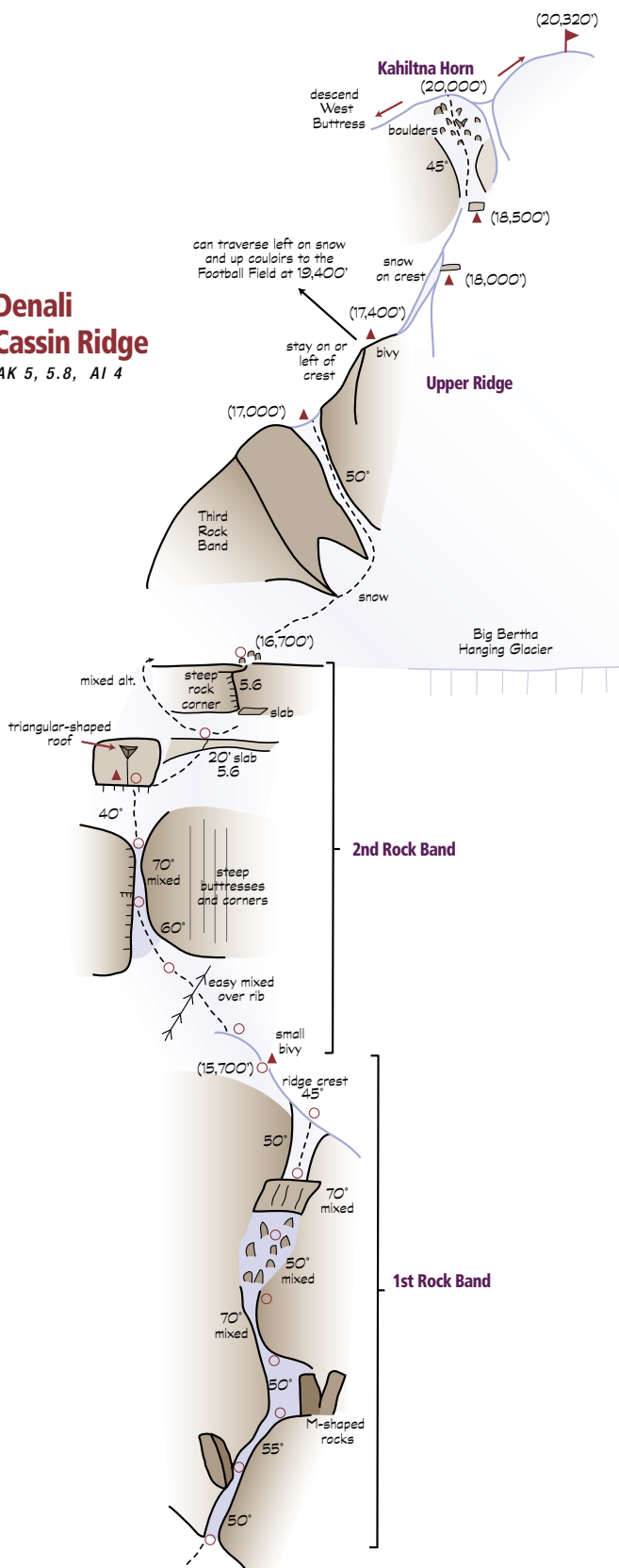
There is of course a fine line between taking too much food and fuel and too little. Going as light as possible will definitely increase your chances of success, especially since good weather spells commonly don't last more than four to five days. Route-finding is generally





## Denali Cassin Ridge

AK 5, 5.8, AI 4



straightforward, allowing much of the route to be climbed in low-visibility conditions. But beware; the south face of Denali is no place to be in a big storm. Only a couple locations on the route lend themselves to digging in a protected bivy. Most bivies are small and exposed.

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### Specific Hazards

Regardless of the approach used, climbers must enter the Valley of Death. Catastrophic avalanches are common here and climbers must accept a certain level of risk to travel into this area. The Japanese Couloir is prone to natural rock and ice fall, especially in the late afternoon sun.

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### Gear

Take six to eight ice screws, five to six cams to 2", one set of stoppers, and two to four pickets. Rope selection has many alternatives. A team traveling very light and fast may only need one 165 or 200-foot rope, if all pitches are lead with a pack and retreat is doubtful. Two 200-foot double or twin ropes allow a good safety margin for leading and retreating and allow an extra line to haul a pack on if needed. The

average climber considering this route will be able to lead a great deal of the climb even with a heavier pack. Bring two ice tools per person.

Snowshoes can be very useful up the Northeast Fork for the approach. Use a lightweight pair that you can put on your pack and carry up the route. An additional two lbs. of weight on your pack may seem like a lot, but they are sure going to be useful when a storm dumps six feet of snow while you are camped at the bergschrund, and you need to walk back out. If conditions are good or a trail is broken, you may be able to walk in. While useful for acclimatizing on the West Buttress, skis are not recommended for the approach because they would be difficult to retrieve after the climb. Some parties purposely break a trail to the Safe Camp or to the base of the icefall with skis, return to the 7,800-foot Camp, and then walk back over the broken trail when it is cold and firm. One other option involves climbing up the West Buttress and the West Rib Cut-Off and descending the West Rib. The bottoms of the two routes are very close together, necessitating only crampons for traveling. This option should



only be considered for very advanced teams that wish to move fast.

Many climbers will bring extra comforts for the West Buttress route that won't go along for the Cassin. These can be a real moral booster if pinned down for many days, waiting for the weather. Consider bringing a larger base camp tent in addition to the small bivy tent. Some climbers even bring two sleeping bags, a lighter one for the route and a heavier one for the approach.

Most parties will leave a cache at the 14,000-foot Camp on the West Buttress. This generally includes a few days of food and fuel, the base camp tent, and the rest of the heavy amenities that are not necessary. It can also be a good idea to leave the climbing gear, climbing food, and fuel for the route in a cache at the Northeast Fork. This allows lighter loads to be carried up the West Buttress. Unfortunately, there has been reported theft of caches at the Northeast Fork in recent years, so use your best judgment.

### Camps

The following is a list of recommended locations to camp for this route. See the West Buttress Route for other camp locations.

**Safe Camp (9,450 feet):** Located on the Northeast Fork of the Kahiltna, this is a relatively crevasse-free area. The camp is threatened by only the most catastrophic avalanches. It may not be such a safe place during a storm. The camp sits on a rise in the center of the glacier, set back from the ominous north face of East Kahiltna Peak. Use good judgment when camping here.

**Bergschrund (12,200 feet):** Just under the bergschrund, there is a small serac that provides a small area to camp. Although it doesn't seem threatened by icefall, past pictures suggest that the entire base of the Cassin and even Kahiltna Notch can be decimated by avalanches off the South Face.

**Cassin Ledge (13,000 feet):** This is a very small ledge underneath a huge rock buttress at the top of the Japanese Couloir. Many



Mark Westman atop the crux gully above Cassin Ledge. Photo by Joe Puryear

are disappointed upon seeing it for the first time, but with a little work, camping here can be a fun experience. Try gathering some surrounding snow to fill in the bouldery ledge. The ledge is barely wide enough for a small single-wall tent, although two may fit end to end. There are good rock anchors on the wall above.

**Hanging Glacier (14,000 feet):** Just after the end of the knife-edge ridge, this is the route's most comfortable camp. A large and safe location big enough to accommodate several tents and possibly dig a snow cave.

**Hanging Glacier Bergschrund (14,700 feet):** This small bivy site is reached just before the first rock band. With a little work it can provide a decent protected bivy, but it is not as comfortable as the Hanging Glacier camp just a few hundred feet lower.

**Top of First Rock Band (15,700 feet):** This is a small exposed location between the two rock bands that may require chopping out a platform. This makes a good intermediate camp to split up the two rock bands.

**Middle of Second Rock Band (c. 16,400 ft.):**

A small ledge beneath a small triangular shaped roof after the crux provides a small bivy location. An excellent finger crack in the wall provides good anchors.

**Top of Second Rock Band (16,700 feet):**

At the top of the technical difficulties, this spot is low angle but very exposed. It may be possible to chop out a good platform next to the rocks, but it is recommended to continue to the upper ridge for a more protected location.

**Upper Ridge (17,300 feet), (17,700 feet):** At the top of the couloir that regains the ridge is a small exposed col. This makes an okay spot but a better spot is located just a bit further in a higher col (17,700 feet). This makes a good final camp before the summit bid. There are some higher spots that afford exposed bivies next to boulders at 18,100 feet and 18,700 feet.

**Approach****Northeast Fork Approach**

From Kahiltna Base Camp (7,200 feet), follow the West Buttress route 5.5 miles to the base of Ski Hill (7,800 feet). Here is the junction of the Northeast Fork (a.k.a. Valley of Death). Alternatively, if you are starting from the 14,000-foot Camp, descend back down the West Buttress route to the same spot. The Northeast Fork will require tenacity and good decision making to arrive at the base of the Cassin unscathed. It is extremely inadvisable to enter the valley until 24 to 48 hours after any snowfall—more if it was a big storm. The valley is flanked on both sides with hanging glaciers and seracs. In places, the seracs are higher up one side than the width of the valley. Avalanches can sweep the entire valley floor and up the other side. While you can mitigate the amount of time you are in supreme danger, you must accept the unavoidable risk of traveling into this awesome and rewarding place. Many parties travel though the valley at night to reduce avalanche danger. However, serac fall can happen at any time day or night.

Turn northeast and ascend into the valley. The first three miles are not exceedingly dangerous or crevassed. Take the best path through the center of the glacier. At 9,000 feet, there is a spot between two buttresses on either side of the valley that provides a relatively safe place to take a long break. The best place to rest or camp on the glacier, dubbed Safe Camp, is reached at 9,450 feet, in the middle of the glacier.

From here keep ascending east toward the big ice-fall and crevasses that split the glacier end to end. The valley starts to narrow and the danger is perceived to increase. The icefall can be quite difficult and has turned back many parties. Generally it is best to bear toward its middle at the start. It may then be necessary to climb into and out of several large crevasses while trending right toward the south side of the glacier. The route changes season to season and within each season. Use your best judgment and move quickly. Once atop the icefall (10,600 feet), the base of the West Rib is due north. A spot on the west side of the West Rib Couloir is a safe spot if you need break, but it is a bit out of the way and it's not that far to the base of the Cassin. Head up and toward the South Face of Denali. In this area there are multiple ice cliffs, between one and five thousand feet above you. Traverse left around several crevasses then head back right to the bergschrund near the base of the Japanese Couloir.

**West Rib Approach**

From the 14,000-foot Camp, ascend the West Rib Cut-Off to about 16,000 feet on the West Rib. Descend the rib by down-climbing and rappelling. Refer to the West Rib route for more route details. From the base of the rib, walk quickly to the base of the Cassin. While this may seem a safer and maybe faster option, consider the inherent difficulties in descending 5,000 feet of steep snow and ice. Time wise, it is probably only a couple hours faster, and there is still acute danger when traversing to the base of the Cassin.





Joe Puryear approaching the first rock band. Photo by Mark Westman

## Route

### Japanese Couloir

At the base of the Japanese Couloir (12,300 feet), cross the small bergschrund. Climb four pitches of snow or ice at an angle of 50-degree. Above, the couloir splits, presenting two options. On the right is a short step of steep ice (up to 80 degrees) or on the left is moderate and protectable rock (5.6). Climb either one, then continue four more rope lengths, using ice and rock pro, up the steepening couloir (up to 60 degrees). Just below its top, traverse left for 30 feet. From here look left and behind you (west) and you will see the tiny Cassin Ledge beneath a steep wall (13,400 feet). From the right side of Cassin Ledge, climb a pitch of snow straight up to the big rock wall above. Don't be tempted up by the old fixed lines. Instead, make an exposed traverse right for half a rope length until an easier looking gully appears around a corner. Climb this rock crux (5.8) and belay off slings up and right.

### Knife-Edge Ridge

The next section is the Knife-Edge Ridge. This can consist of brutal hard blue ice,

snow over terrible ice, or anything in between for about eight rope-lengths. The ridge starts off steep and sharp, then lies back with cornices. Protection can vary dramatically. Reports contrast from having sinker screws all the way to not being able to place any protection but for two poor pickets near the end. For the first several rope-lengths, it may be possible to climb directly on the ridge crest. Higher up, the ridge becomes corniced with the cornices overhanging to the west (left). Here it is best to traverse on the east (right) side of the crest. The ridge eventually dead ends into the hanging glacier and the biggest camp on the route (14,000 feet).

### Hanging Glacier

Climb the easy glacier up to the infamous ice headwall. Currently this once formidable obstacle can be passed by a conspicuous break on its right side. Climb through this short step (up to 70-degrees) then up the low angle glacier. This new passage appeared in the spring of 2000, and may disappear as the glacier moves and changes. Prior to this there were two options to overcome this barrier. One was to ascend the 60 to 80-foot gently overhanging wall





3rd Rock  
Band

2nd Rock  
Band

1st Rock Band

Hanging Glacier

Knife-Edge  
Ridge

Cassin Ledge

Japanese Couloir

Big Bertha

M-Shaped Rocks



directly, using aid or free climbing. This is a difficult but straightforward endeavor. The other option was to climb up and left from the camp to the left most edge of the wall. From here it is possible to make an 80 foot V-thread rappel into an ice gully below. The gully is steep for the first bit, then eases off and climbs around the hanging glacier. Exit right to the lower angle glacier above. This variation is exposed to icefall. Once on the glacier above the ice headwall, make a rising traverse right looking for a gully that cuts into the rock band above. This right-slanting gully is several hundred feet below the apex of the hanging glacier and is marked by a prominent prow-shaped rock on its left side. At the top of this gully a set of M-shaped rocks can be seen with some imagination. Near the top of the glacier, cross the small bergschrund (14,700 feet).

#### First Rock Band

Climb the ice gully (up to 55 degrees) in two pitches using ice and rock pro. This leads to a small bowl left of the so-called M-shaped rock. Climb straight up a pitch to a rock wall at the base of a tight gully on the left. Climb this difficult mixed chute (70-degree mixed). Then climb up and right for two pitches through moderate ice gullies and boulders. A short difficult mixed section (70-degree mixed) is climbed in a pitch. One more pitch leads to a left-trending snow arête between the two rock bands. Climb this for a pitch up to a small bivy at the base of the second rock band (15,700 feet).

#### Second Rock Band

From the bivy, traverse up and left over a small rib for two pitches to avoid the intimidating climbing above. Look for a main weakness and gully to the left. One crux pitch (70-degrees mixed) will lead to easier mixed terrain above. The next pitch leads to a big rock with a noticeable small triangle-shaped roof. Here there is a small ledge and good belay and possible bivy. The next pitch traverses right, then up a short and stubborn snow-covered slab (5.6). Next traverse right and mantle onto another sloping slab, then up a beautiful left-leaning dihedral (5.6). Another option is to climb

out left then back right on easier mixed ground. This takes you to 16,700 feet and the end of the technical climbing.

#### Upper Ridge

The terrain here is a broad plateau that is not very steep. Climb out and right onto the broad slopes of the southeast face above Big Bertha, then back up and left in the first couloir. Watch the avalanche conditions on this slope. This bypasses the third rock band and leads back to the ridge crest (17,300 feet). Follow the bouldery ridge, bypassing obstacles on the left. Many variations exist here. Pick the path of least resistance and try to stay on good ice or snow. Between 18,400 feet and 18,700 feet, the ridge is broad and snowy. Above this, the ridge becomes less distinct. Follow snow or ice slopes up and slightly left into a depression with easy mixed terrain. This turns into a face that is climbed directly to the top of Kahiltna Horn (20,120 feet). Drop your pack and run up the ridge (east) to the summit.

#### Descent

Descend the West Buttress route. If descent is necessary from the route, rappel and down-climb the line of ascent. There are many fixed anchors, but if you are high on the route, expect to lose all of your rack and then some. The most difficult section to retreat is the knife-edge ridge. If the ice conditions are bad, rappels will be difficult and down-climbing scary. Before starting up this section, make an honest assessment as to your party strength. It is only 11 rappels to the ground from here.