

Backpacking 101: How to Not Die

Briana Indahl + Sam Factor

Planning A Trip: The Basics

- Well established route?
 - Do you need a permit?
- How many days + distance
 - How much food can you carry?
- If route is not a loop - which direction do you want to go - think about scenery
- Study maps and blogs

Need to have a good understanding of:

- Terrain
- Water access
- Weather (time of year)
 - Temp during day (range of possibilities)
 - How cold at night
 - What/how much precipitation
 - Wind speed
 - Will snow be melted in mountain passes
- Elevation (base, gains+losses)
- Ever above treeline (what times)
- Wildlife (bears)
- Land rules
- How in shape you are...

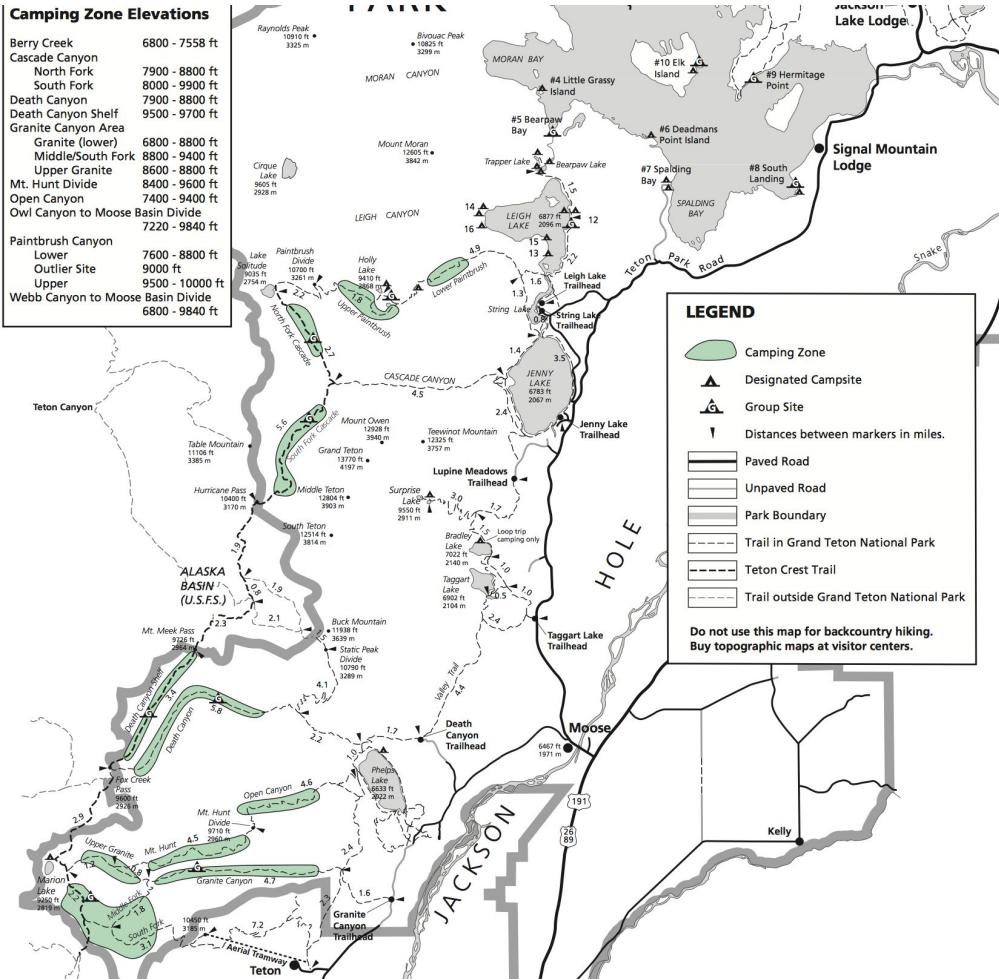
General Guidelines for route planning*

- Assume 2 mph pace
- Add an hour for every 1000 ft elevation gain (plus extra rest time)
- Factor in 10 minute break for every 30-60 minutes (more for large elevation gains)
- Factor in time to enjoy the scenery. That is why you are there!
- Want to get to camp around dinner time
- Generally wake up when sun rises and sleep when it sets
- I like to stick to 8-12 mile days
- Usually want 1st day to be the easiest
- Save longer/harder days for the end when your pack is lighter
- Pack for 5 days weights $\sim \frac{1}{3}$ body weight

Grand Teton: An example

- Mountainous
- See 1500 ft elevation gains+losses along Teton Crest Trail
- Designated camping areas (permit required)
- Frequent stream crossings
- For August about 60-70 deg during the day
- Around freezing temps at night
- Expect rain
- Possible snowy passes
- Bear country

[https://www.nps.gov/grte/planyourvisit/
upload/Backcountry16-access.pdf](https://www.nps.gov/grte/planyourvisit/upload/Backcountry16-access.pdf)

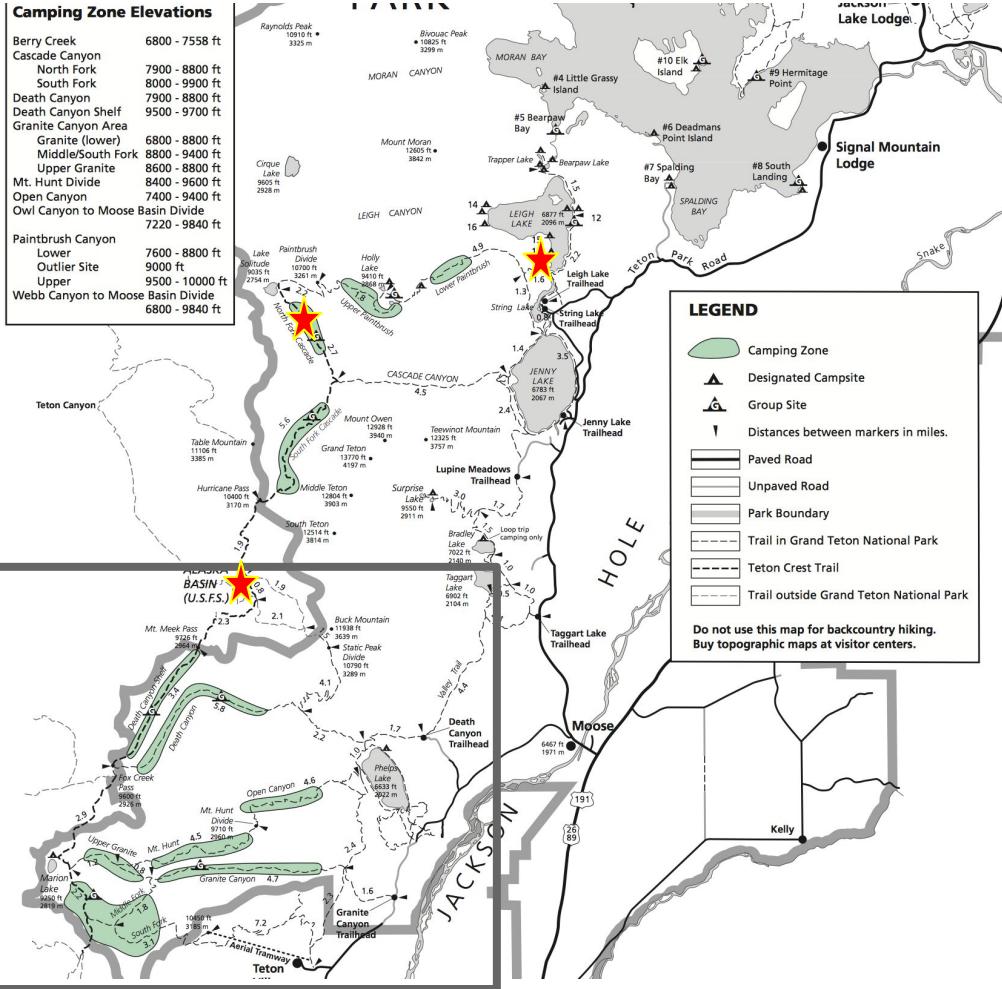


Grand Teton: An example

- National parks require a permit to hike the backcountry.
- Permits application due in January for peak summer season
- Famous parks/routes permits are very competitive
- Usually $\frac{1}{3}$ of permits available for day of hiking (hard to get)

Our Permit:

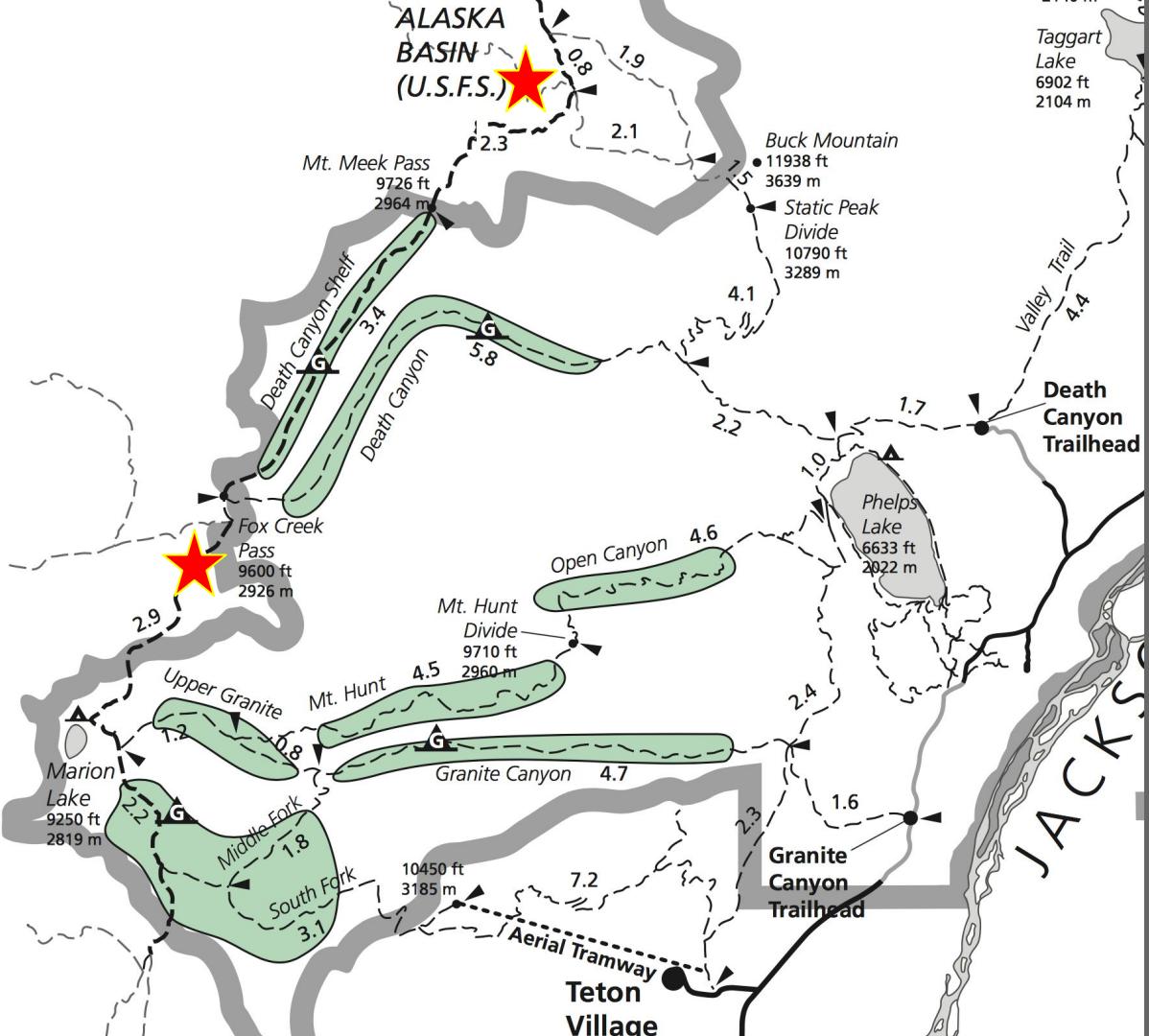
Alaska Basin, North Fork Cascade, Leigh Lake



Grand Teton: An example

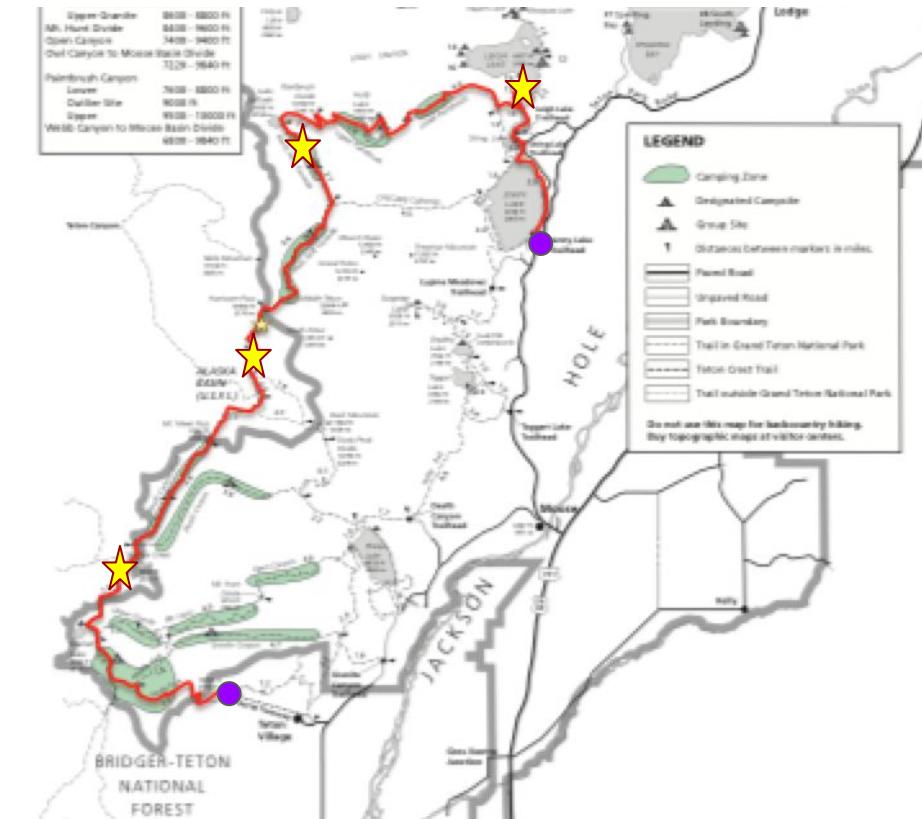
Be familiar with entire area - plan alternate routes if necessary

- Read backpacking blogs!!!



Route

- **Entrance Trailhead:** Tram to Rendezvous Mt.
- Day 1:
 - Miles: 8.2
 - Elevation changes: 500-1500ft
 - **Camp:** Fox Creek Pass
- Day 2:
 - Miles: 8.4
 - Elevation change: 500-1000ft
 - **Camp:** Alaska Basin
- Day 3:
 - Miles: 8.3
 - Elevation change: 500-1500ft
 - **Camp:** North Fork Cascade
- Day 4:
 - Miles: 10.9
 - Elevation change: 500-2000ft
 - **Camp:** Leigh Lake #13
- Day 5:
 - Miles: 5.9
 - Elevation change: mostly flat
- **Exit Trailhead:** Jenny Lake Trailhead



Planning A Trip: The Basics

Every Trip is different

**There is no one formula - very dependent on location,
weather, bears, water access, number of days, group's ability**

Planning these trips is a skill learned from experience

**If it is your first trip go with someone experienced -
especially get help planning from someone that is experienced**

Gear

- Backpack
- Tent
- Sleeping bag
- Sleeping pad
- Camp stove (fuel)
- Clothes (hiking + sleeping)
- Hiking Boots



Big Money Items - Make sure these items are quality and fit your trip - don't be stingy here!

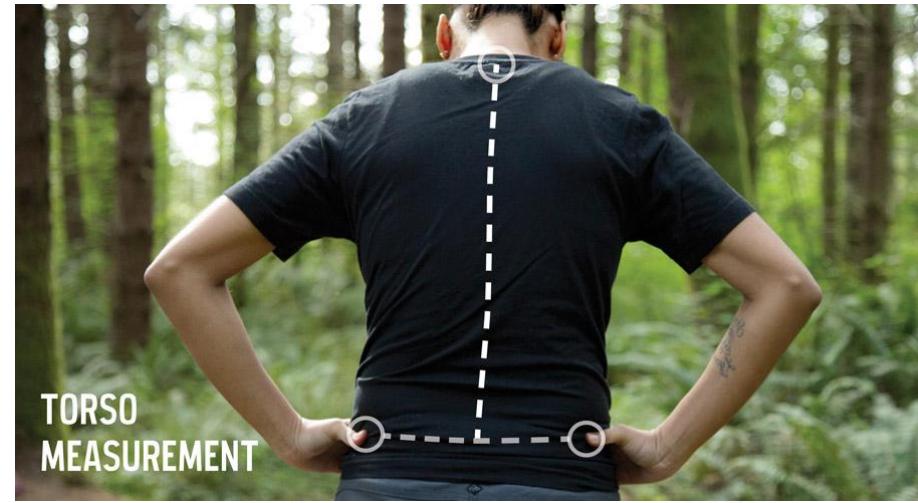
- Water filter
- Camelback + Nalgene
- Lightweight pillow
- Stuff sacks
- Headlamp
- Map
- First aid kit
- Dopp Kit (toiletries)
- Food
- Knife
- Camera
- Sun protection: hat, sunglasses, sunscreen
- If Bears: bear canister and bear spray

General Survival Stuff that is good to carry

- Compass
- Some kind of fire starter
- Knife
- Bandana
- Small microfiber towel
- Paracord

Backpacks

- Need to pick the right size for your trip
 - Food takes up most space
 - 2-3 day 40-55L
 - 4-5 day trip 55-65L
 - Bigger people need more space - they have bigger stuff and eat more generally
 - may need more if solo trip
- Backpacks are gendered and there are differences
- Must fit right (try on with weight)
 - Most important is your torso measurement NOT your height
 - Torso usually only adjusts by a couple of inches
- \$200-\$350 for 55-70L pack



Tents

- Must be backpacking tent
 - MUCH lighter than car camping tent
- 4-season vs. 3-season tents
 - extra season is winter
- Things that matter most:
 - Weight (~3-4lbs for best 2p tent)
 - Should look at either 2p or 1p tents
 - How well it holds up in wind and rain (read reviews)
 - 2p, 3-season tents cost \$150-\$400

4-Season

Mountain Hardware Trango 2 Tent

Price: \$650

Packed Weight: 9lbs 13oz



3-Season

MSR Hubba Hubba NX 2P Tent

Price: \$400

Packed Weight: 3lbs 13oz



Don't forget to buy the footprint! (~\$40-50)

Sleeping Bag

- Want to pick the correct **size** for your height
 - Don't want to carry more than you have to
- Most important is to pick the correct **temp rating** for your trip
- How cold will it get at night
- Rating is generally the temp that you will **survive**...not necessarily be comfortable...

E.g. If it will get around freezing at night you might want a bag rated to 15-20 degrees.

A good tent, sleeping pad, and another person in your tent will add an extra 10-15 degrees

Real Down

Advantage:

- packs really small and is light
- bags rating to much colder temps

Disadvantage:

- Does not dry quickly - If it gets wet you are fucked
- more expensive

Get this if you are going somewhere with little precipitation and/or winter camping/mountaineering

(waterproof stuff sack is a must)

Synthetic Down

Advantage:

- Much cheaper
- Dries quickly

Disadvantage:

- Does not compress as well - heavier
- Not really synthetic bags rated below ~10 degrees

These bags generally are the best choice for 3 season backpacking in mountainous regions where rain is expected on a near daily basis

Sleeping Pad

- Want to pick the correct size for your height
 - Don't want to carry more than you have to
- \$100-\$250 (Open Cell - highly recommended over foam)
- Can get $\frac{3}{4}$ length pads to save weight

Closed Cell (foam)

Advantage:

- Cheapest option (\$20-\$30)
- Can use as sit pad in camp

Disadvantage:

- Does not compress well - usually store on outside of pack
- Not as comfortable

Open Cell (Self inflating)

Advantage:

- More insulation than Air pads
- Easier to set up
- Not as bulky as foam

Disadvantage:

- Does not compress well, can be punctured easily
- More expensive

Open Cell (Air pads)

Advantage:

- Much cheaper
- Compresses really small

Disadvantage:

- More time to blow up and compress back down every day
- Can be punctured easily



Camp Stoves

Look up/experiment with how much fuel it takes to boil a liter of water to estimate how much fuel you'll need

For super high elevation/cold weather hiking: Liquid-fuel stoves are the best

Other:

Alcohol, Solid tabs:

- Super cheap, small
- Doesn't burn as hot, takes longer to boil



Canister (propane)

Advantage:

- Small Lightweight
- Quick to light,
- Adjustable

Disadvantage:

- Hard to tell how much fuel is left, can't refill canister
- Fuel is more expensive

Liquid-fuel (white gas, gasoline)

Advantage:

- Cheap fuel, can run on many types
- Lower profile, more stable
- Refillable

Disadvantage:

- Requires more cleaning/maintenance
- Heavier, more expensive

Clothes (only 2 sets, you're going to stink!)

Day (hiking) clothes

- Cotton is the enemy! (not an add for Under Armour) Wicking synthetic or wool
- I prefer long sleeves which I can roll up
- Pants vs shorts: Sun protection, temperature, well maintained or overgrown trail?
- Zip off pants may not be stylin but they're functional as fuck!

Night (sleeping) clothes

- If it's cold bring an extra pair of socks to sleep in (it makes a big difference)
- Be strategic about items - don't bring bulky heavy fleece to stay warm

Extra layers

- Rain, cold weather (jacket, hat, gloves, buff)

At high elevation

- Sunglasses, hats, sunscreen a must!



Jackets

May need depending on weather condition you expect where you are hiking

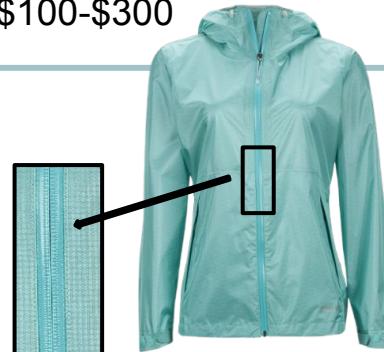
To buy Gore-Tex or not: The Great Debate

- Don't - but just my opinion
- Gore-Tex - "breathable" waterproof material
- Still very heavy
- Extremely expensive

Waterproof Shell

- Be careful of water resistant - not the same and useless
- I recommend buying really lightweight single layer (no lining)
- Make sure that it has waterproof zippers!
- These compress down really small and are light
- Can be expensive \$100-\$300

Marmot
Waterproof
Shell
\$115



Cold Weather Puff

- Most mountainous places get cold at night (even in summer)
- Synthetic down dries faster if it gets wet
- Compress down really small and are light (unlike fleeces)
- Can be expensive \$150-\$400

Patagonia
Nano Puff
\$200



Boots

- Waterproof?
 - Can be nice if you come across frequent streams you have to cross
 - Less breathable
- High boots or shoes? Lots of elevation gain and rough terrain?
- Break them in (duh!)
- Camp shoes too! (lightweight)
 - Flip flops/Crocs

Good socks will make or break you!

- Merino wool socks (Smart wool)
 - Quick drying and won't wear through them
 - At least medium thickness

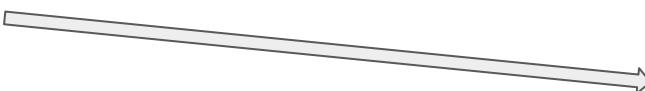
High top hiking boots



Hiking shoes



Need this if hiking uneven terrain carrying >20 pounds



Water Filtration

Bacteria + Protozoa

- Filter all nature water for this!
- Best choice: Sawyer mini filter \$20



<https://www.rei.com/learn/expert-advice/water-treatment-backcountry.html>

<https://www.rei.com/learn/expert-advice/water-treatment-howto.html>

Outside US+Canada Consider:

Viruses

- May have to worry about this in less-developed areas
- Viruses are smaller than bacteria so require extra purification/neutralization
- Best Choice:

Sawyer S2 Purifier \$80



SteriPen (UV) \$50-100 (need to filter out dirt first)



Iodine Tablets \$9 (use in addition to Sawyer mini)(makes water taste bad)

Heavy Metals

- Need a carbon filter to remove heavy metal such as lead
- Only need to worry about this if hiking near a mine where metals could be released into the water
- Best Choice: Sawyer S3 Purifier \$90 (removes all 3)



Food

- Weight of all other stuff is fixed
- Amount of food and what food you bring will determine your pack weight and volume
- This requires the careful planning
- How many miles a day?
Elevation gains and losses?
You need more calories than a normal day!

Breakfast

- Hot breakfast is the best if you have time in the morning (depends on how many miles)
 - Oatmeal with nuts+dried fruit
 - Pancakes (add oats,fruit)
 - Hot coffee, tea

Lunch

- While hiking never want to stop more than ~15 minutes
- Eat frequently
- Dense protein packed foods
 - Mixed nuts (trail mix)
 - Dried fruit/fruit leathers
 - Beef jerky
 - Peanut butter+pita bread
 - Tuna packets
 - Granola bars
 - Soylent/powdered milk

Dinner

Eat at camp - hot meal

- Easiest are pre-packaged dehydrated meals
 - Say the feed 2P but they really feed one
- Can get fancy and cook meals (backpacking cookbooks)
 - Beans
 - Quinoa
 - rice/pasta
- Decaffeinated tea

Mountain House
(pro-pack if high alt) ~\$6-\$8



Bear Rules/Stuff

- Need to follow bear policy to protect both you and the bears
- All smellables must be stored in odor proof bags inside of bear canister
 - Food
 - Deodorant, sunscreen, chapstick
 - Soap, toothpaste (used toothbrush)
 - Not well cleaned dishes
- Always eat at least few hundred feet from campsite
- Hide bear canisters hundreds of feet from campsite and away from cooking area
- Store all gear/backpack away from tent (just in case)
- Carry bear spray and sleep with it close by

10-11 Liters
~\$70-\$90



Bear Spray
(can't bring on plane)
~\$60



Other random gear

Try to only pack what you need, save weight

Dopp kit (toiletries):

- Repackage only enough for your trip
- Be weary of smellables

Knife

- For survival but also for cooking, re gear etc.

First aid

- Bandages, wound cleaning, meds:
vitamin-I (Ibuprofen), antihistamine
(benadryl), altitude sickness?, diarrhea

Headlamp (make sure the batteries are fresh!)

Map (and possibly GPS)



Water

- Camelback (2-3L)
- Nalgene or similar (easier to cook with)

Stuff sacks for clothes and sleeping bags

- Saves space in pack
- Can use to organize
- Use to waterproof clothes+sleeping bag

Poop kit (shovel, toilet paper)

Watch

Luxuries:

- Camp chair
- Compactable pillow
- Towel
- Solar panel
- Hiking poles



Bigger Picture: Leave No Trace

1. Plan ahead and prepare
 - Pack appropriately
 - Know regulations for the area
 - Repackage food to minimize waste
2. Travel and camp on durable surfaces
 - Hike on the trail, camp in campsites
 - Camp >200ft from trails and water
3. Dispose of waste properly
 - Pack in, pack out
 - Dispose of human waste 6-8 in below ground, away from water (some areas require you to pack out human waste)
4. Leave what you find
5. Minimize campfire impacts
 - Use established fire pits
 - Keep fires small, extinguish them when done
6. Respect wildlife
 - Keep your distance
 - Store food properly
7. Be considerate of other visitors

<https://www.rei.com/learn/expert-advice/leave-no-trace.html>

Bigger Picture: Leadership

People are going to get on your nerves, behave in the best interests of the group

1. Expedition Behavior:
 - o Serve the mission and goals of the group, respect
2. Competence:
 - o Take care of yourself to remain a highly functioning team member
3. Communication Skills:
 - o Speak up/be silent when appropriate, listen actively

EB-C-CS-JaDM-TAU-SA-VA

4. Judgment and Decision Making
 - o use the strengths and knowledge of other group members to solve problems
5. Tolerance for Adversity and Uncertainty
 - o Learn to endure and enjoy hard work and challenge, live with what you can't control, control what you can
6. Self Awareness: Understand your abilities, seek feedback
7. Vision and Action: assess what needs to be done and do it

How to afford to do this as a grad student

- Plan ahead and accumulate gear over time
- Become an REI member - earn rewards/coupons - \$20/lifetime
- GO TO REI GARAGE SALES!!!
- Watch for sales at REI, backcountry.com, Amazon....
- This stuff is expensive but if taken care of can last 5-10+ years

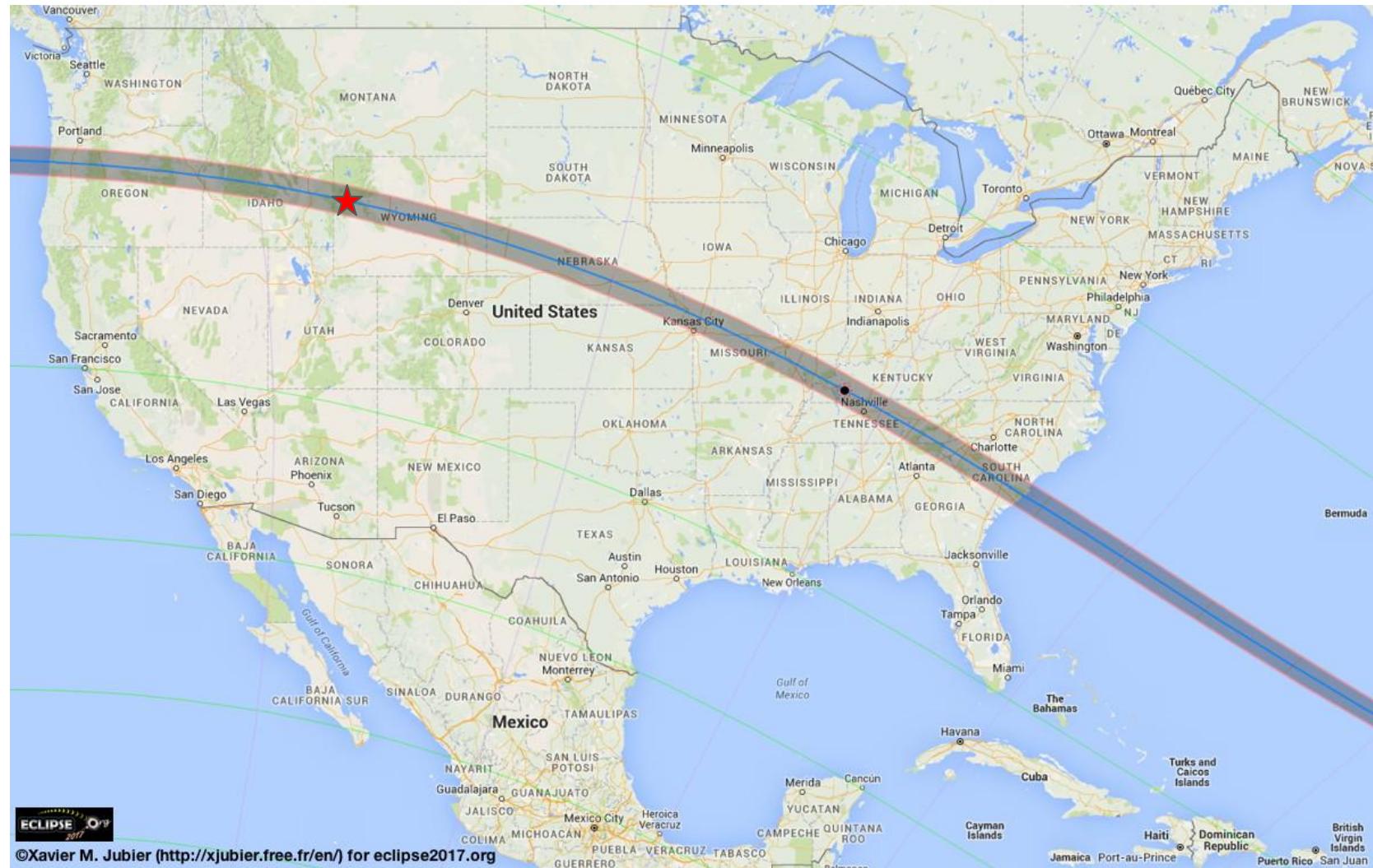
Why backpack?

- Get to see places you can literally only walk to
- Over 2 million people visit Grand Teton National Park per year
- They give out about 5,000 backcountry permits per year
- Get to see a whole other park of national parks and wilderness very few people get to see!

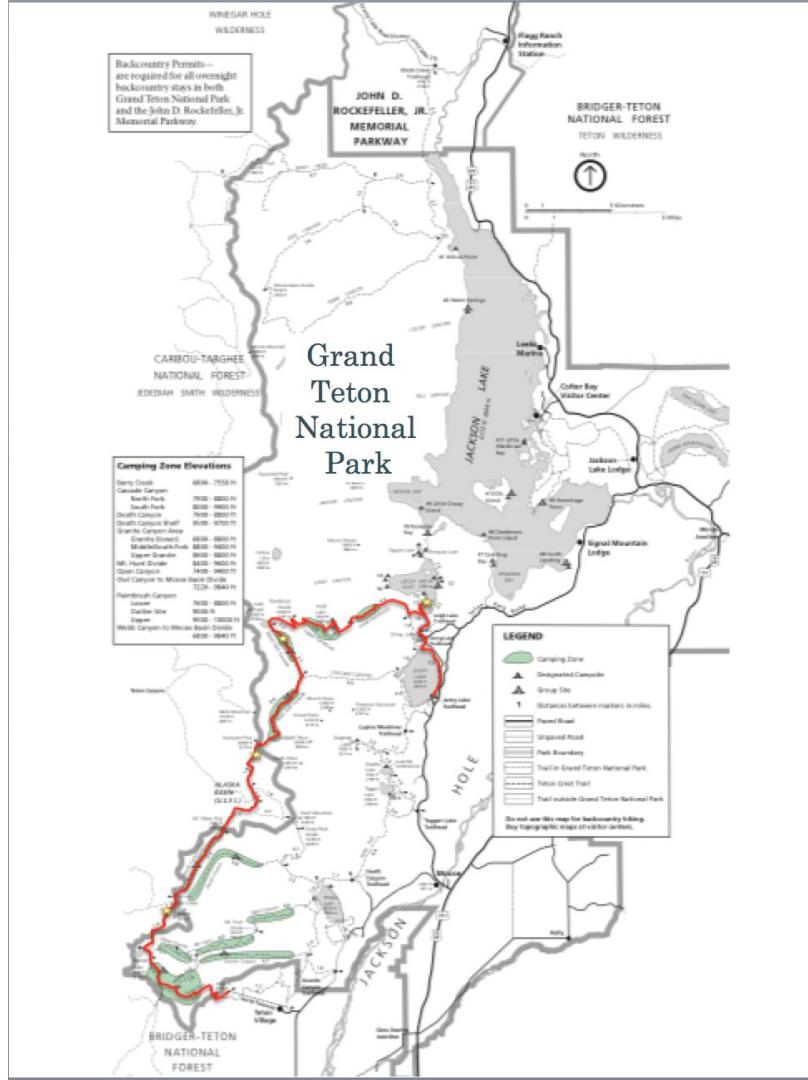
Grand Teton National Park



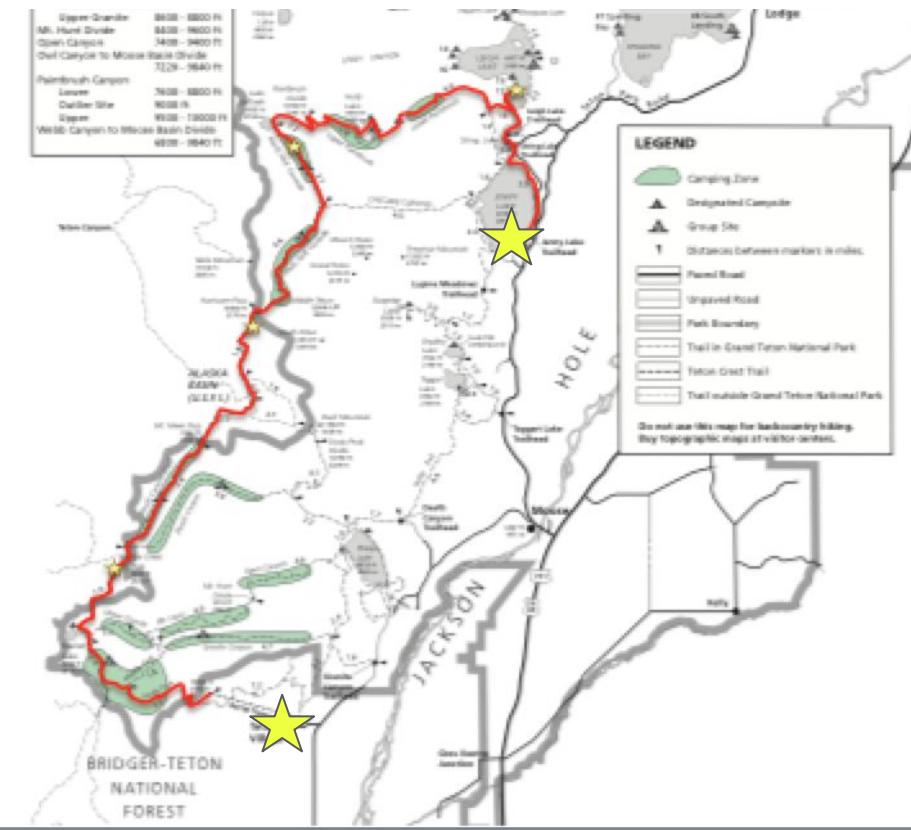
Briana Indahl, Sam Factor, Sinclaire Manning, Zach Vanderbosch, Will Gilmore



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3 Days in Teton Village



- Typically takes a minimum of 3 days to acclimate to high elevation
- Spend 3 days in Teton Village hiking before we started our trip
 - 1st day mostly rest
 - 2nd day more strenuous day hike
 - 3rd day day hike and rest









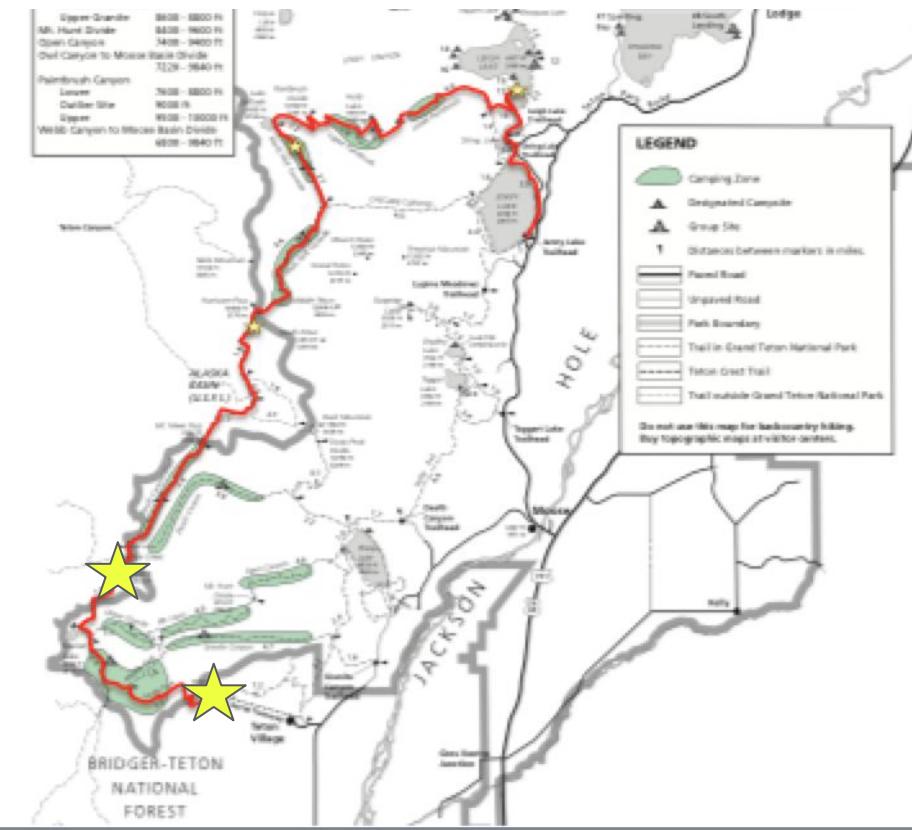








Backpacking Day 1



Started by taking the Tram from Teton Village to the top of Rendezvous Mt.

Camped in Fox Creek Pass

Miles: 8.2



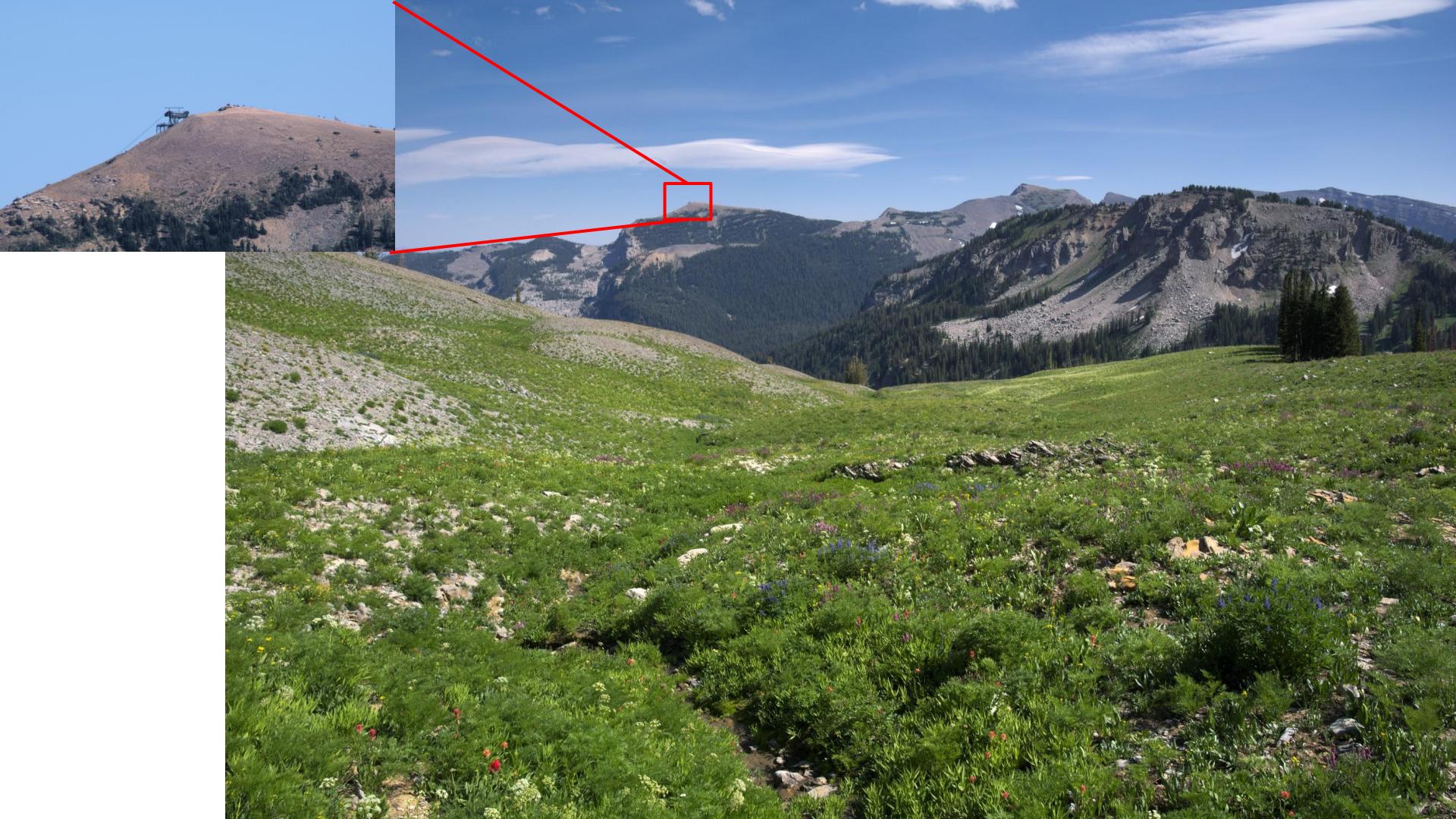
















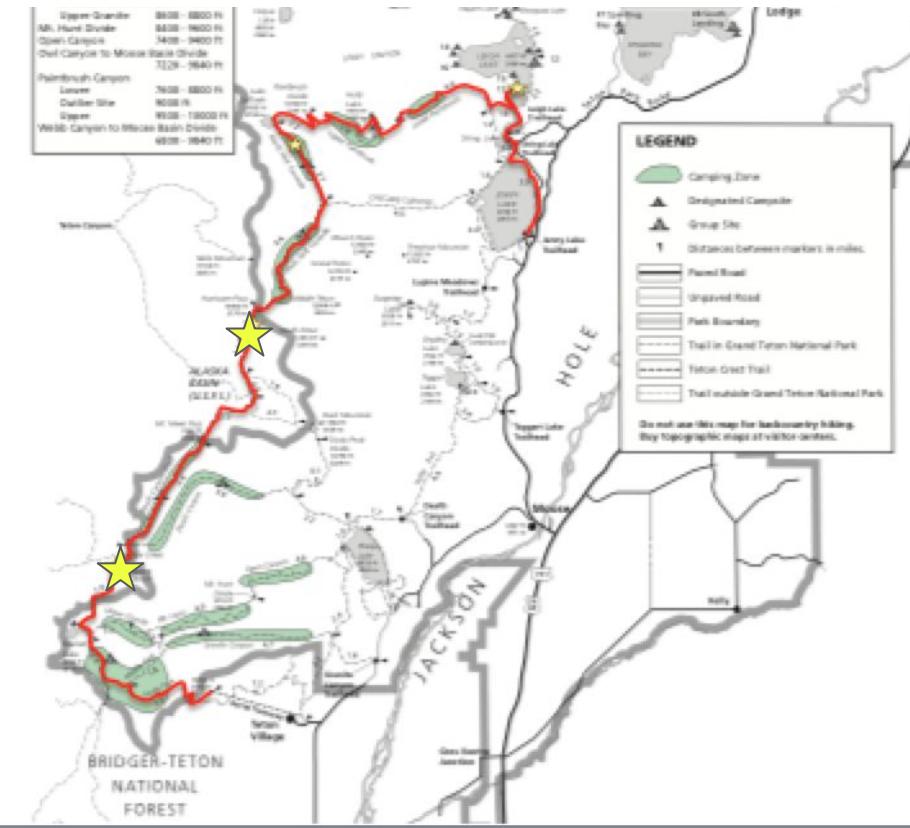
ENTERING
TARGHEE
National
Forest

FOX CREEK





Backpacking Day 2

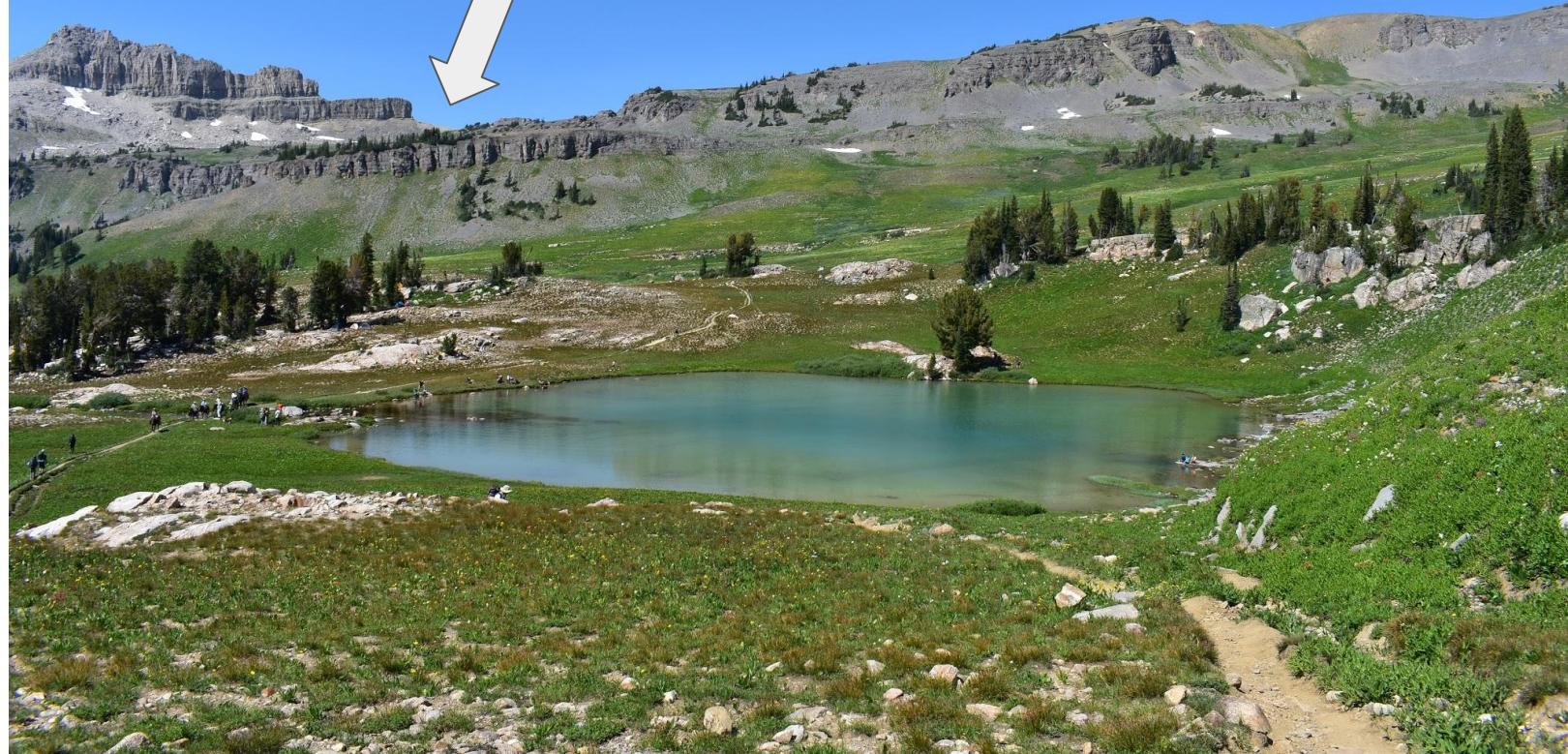


Camped in Alaska Basin

Miles: 8.4





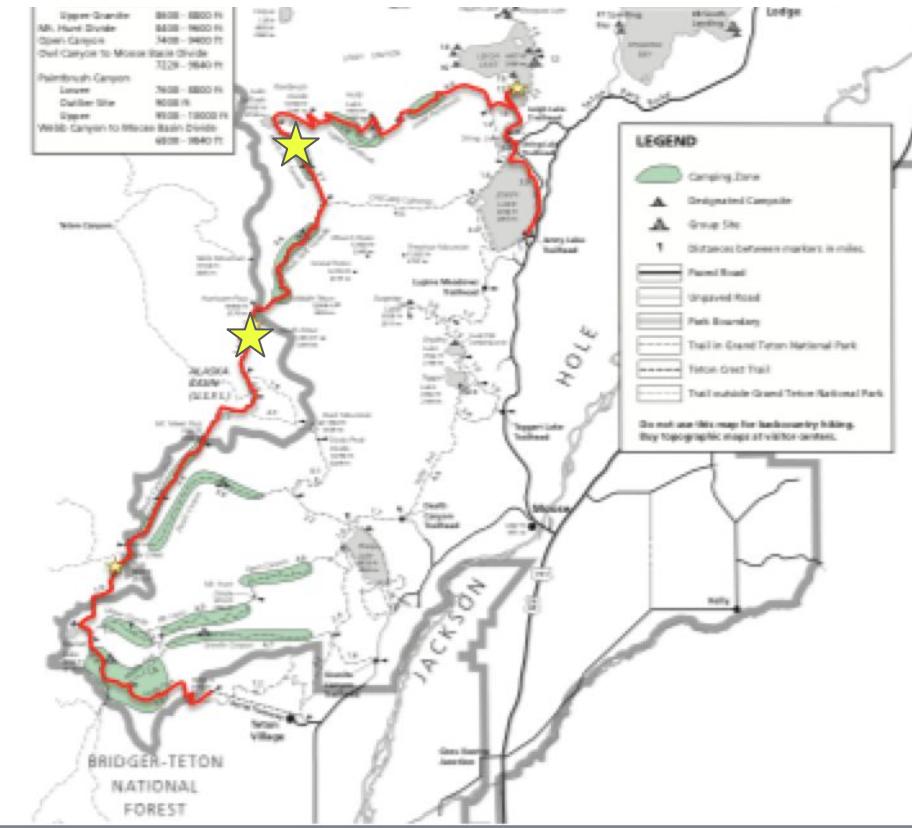








Backpacking Day 3



Camped in North Fork Cascade

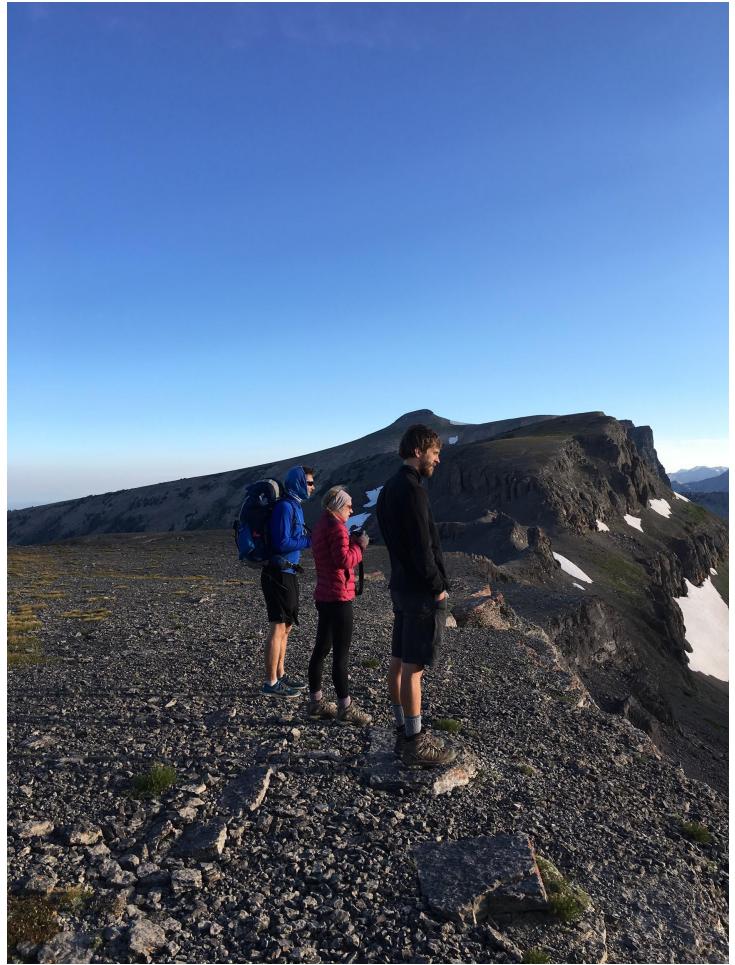
Saw the total solar eclipse right over Hurricane Pass!

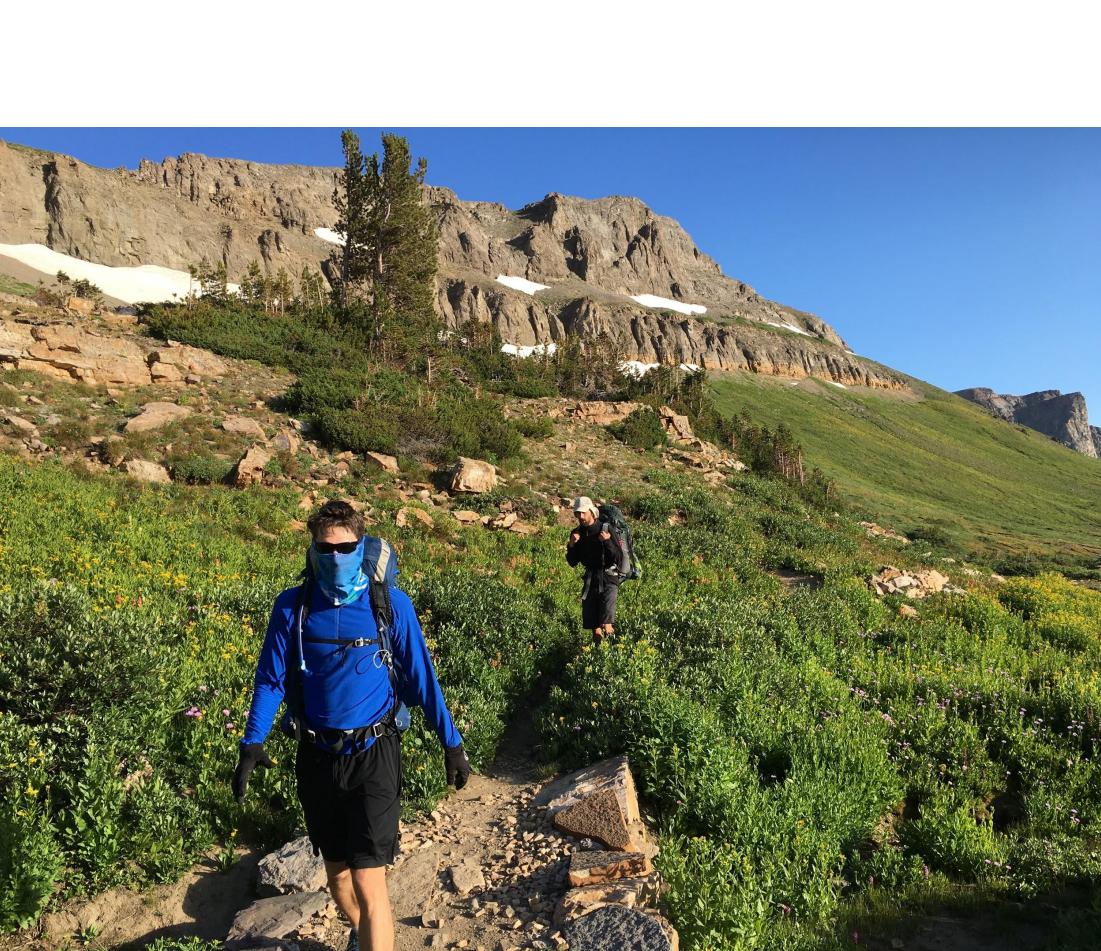
Miles: 8.3











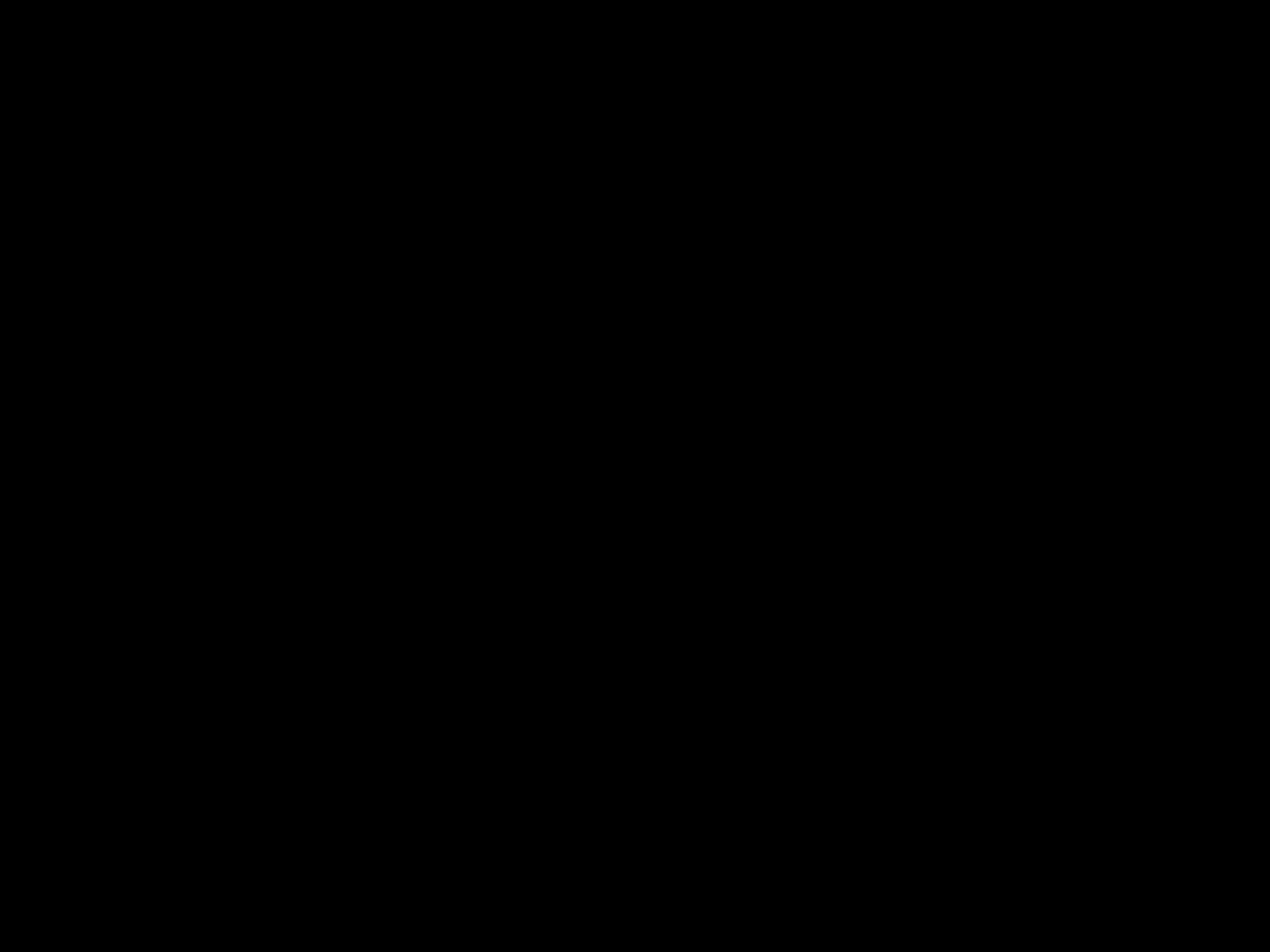


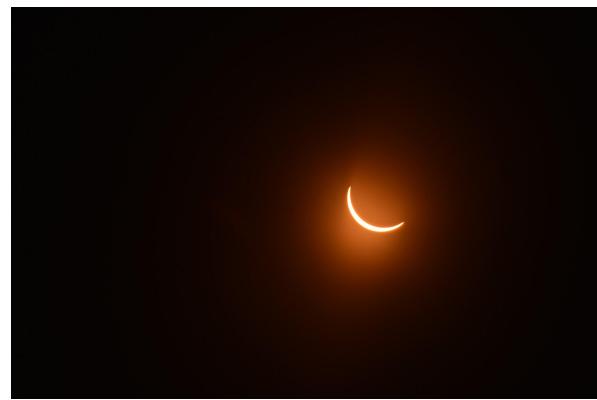




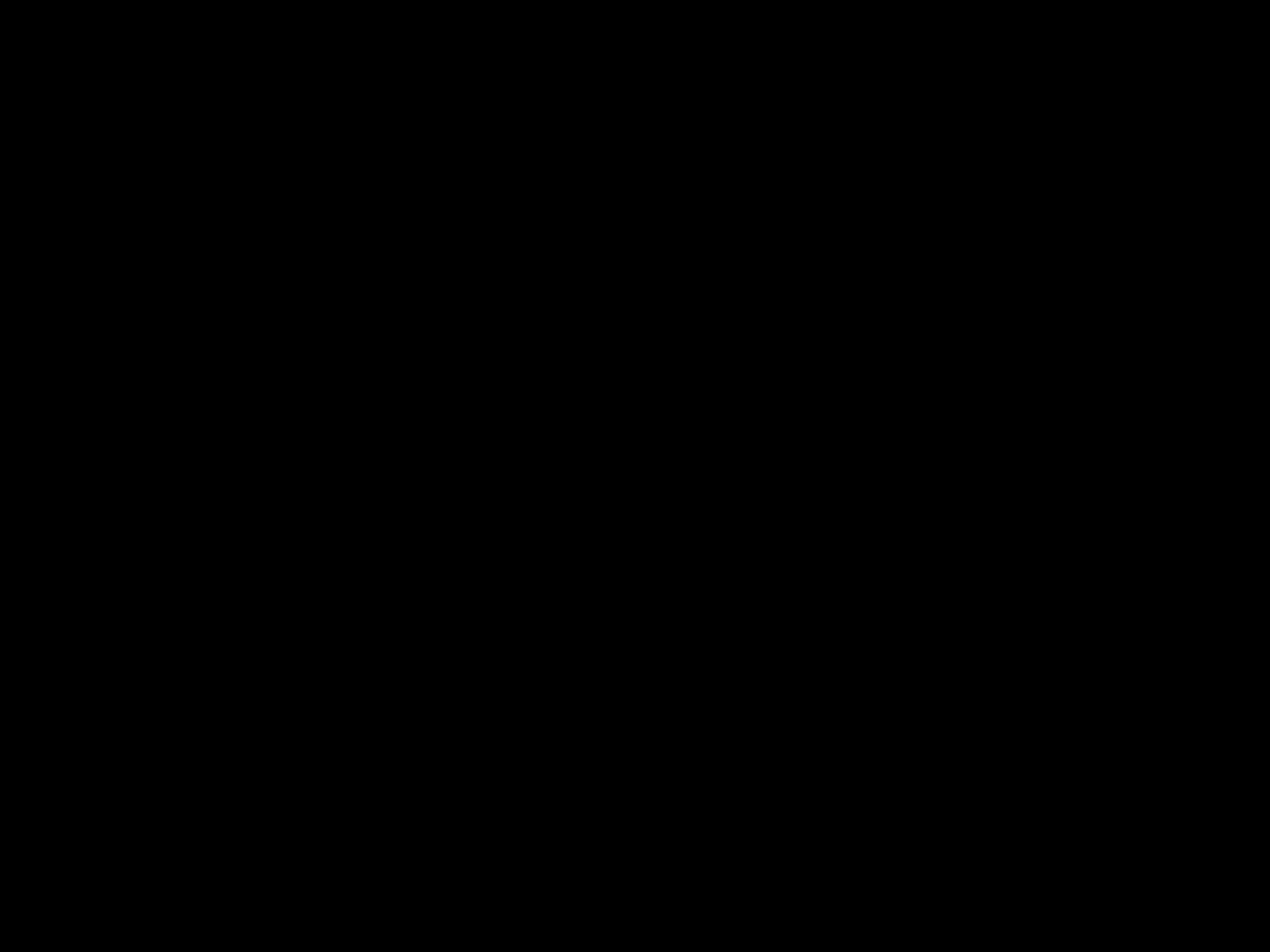
















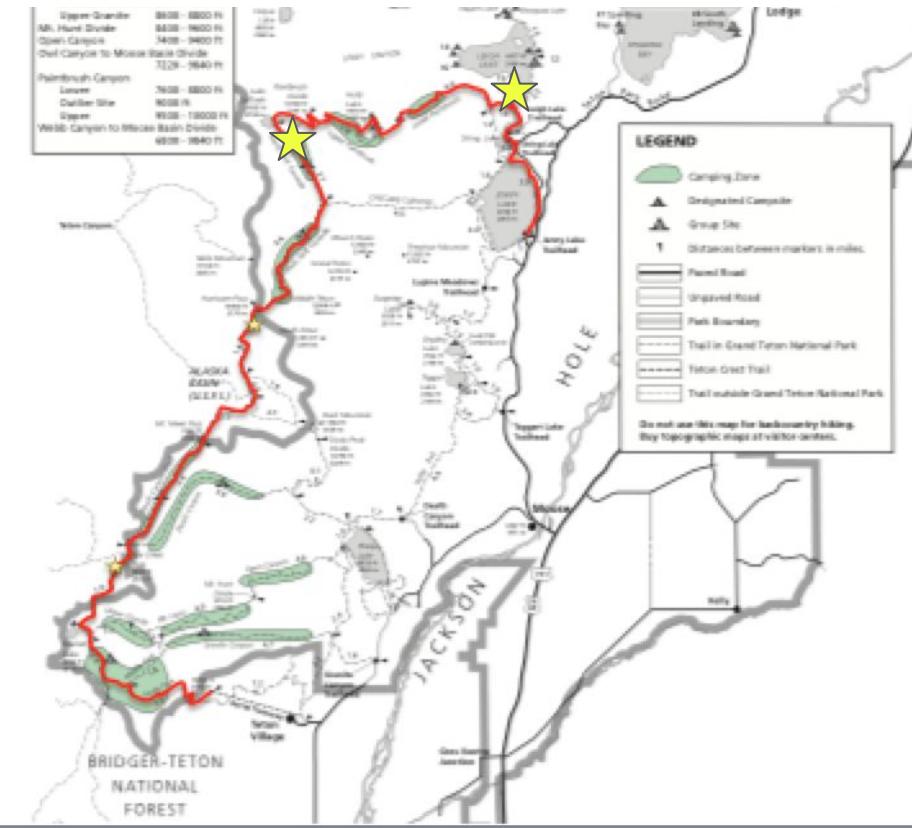








Backpacking Day 4



Camped in Leigh Lake site #13

Miles: 10.9























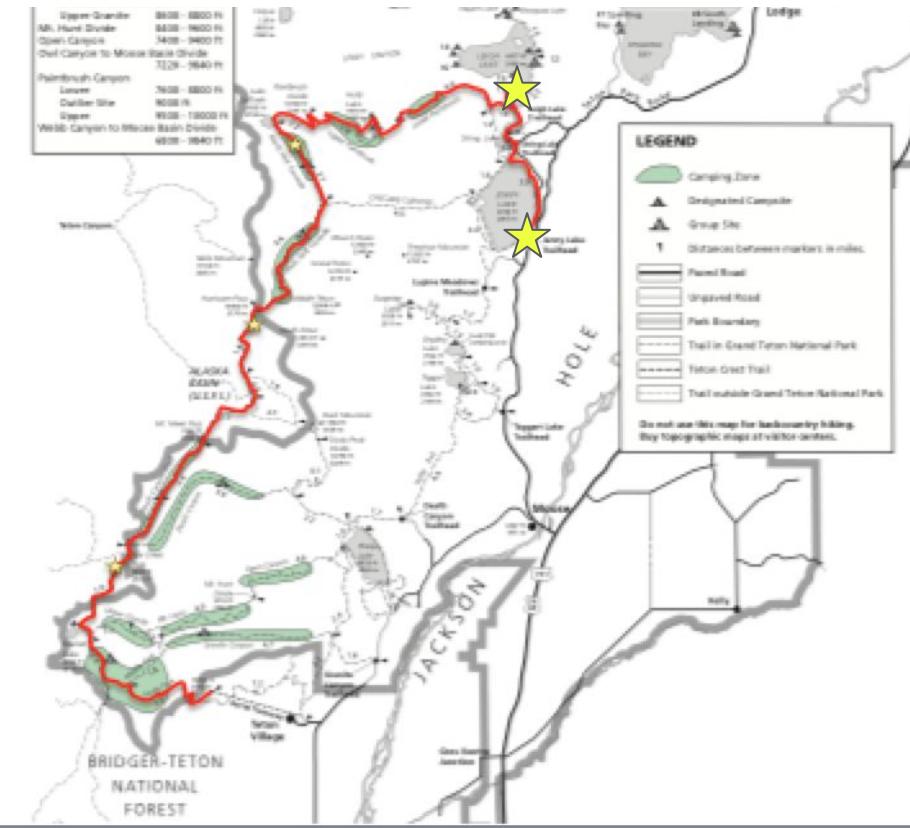








Backpacking Day 5



Ended our trip at Jenny Lake Trailhead

Miles: 5.9







