

Agenda

- Welcome, Class of 2020!
- Intro to Ice Climbing
- “Ice” breaker
- Logistics: Where/When to Be
- Break
- Food: What to Eat and Drink
- Clothing: What to Wear
- Gear: What to Carry
- Questions

Intro to Ice Climbing



Logistics: Where/When to Be

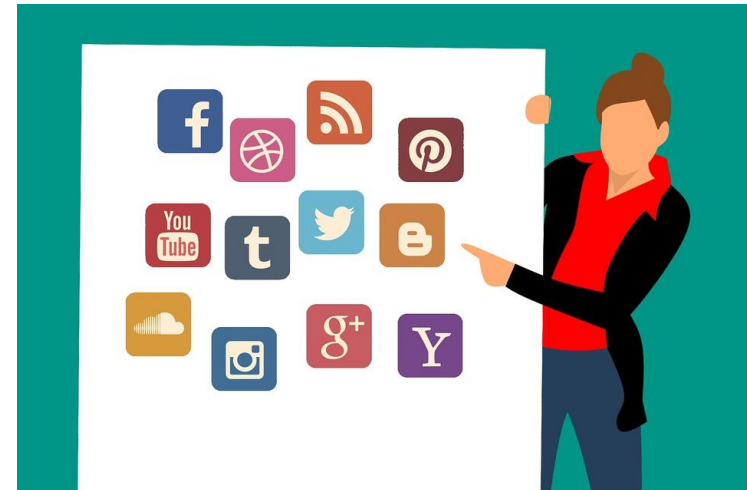
Logistics: Communications

Program Communications

- You will all be added to the Ice Program Google Group
- All official Ice Program communications will be sent to the Google Group

Student Communications

- Ice Program Google Group
- AMCBCCC Facebook Group
- Discord server (unofficial)



Logistics: Navigating

IME

2733 White Mountain Hwy
North Conway, NH 03860

Harvard Cabin (44.182465, -71.227997)

Use *Washburn Way, Jackson, NH 03846* in your GPS and park in the lot to the right or left 500 feet past it coming from the south. The cabin is at the top of a small hill opposite the river, mostly obscured by trees.

Junction Diner

12 U.S. 302, Glen, NH 03838

Arethusa Falls (44.148231, -71.366239)

Leaving the diner, turn right onto 302W and drive 14.7 miles. The trailhead is marked by a small brown sign on your left. Park at the top of the hill.

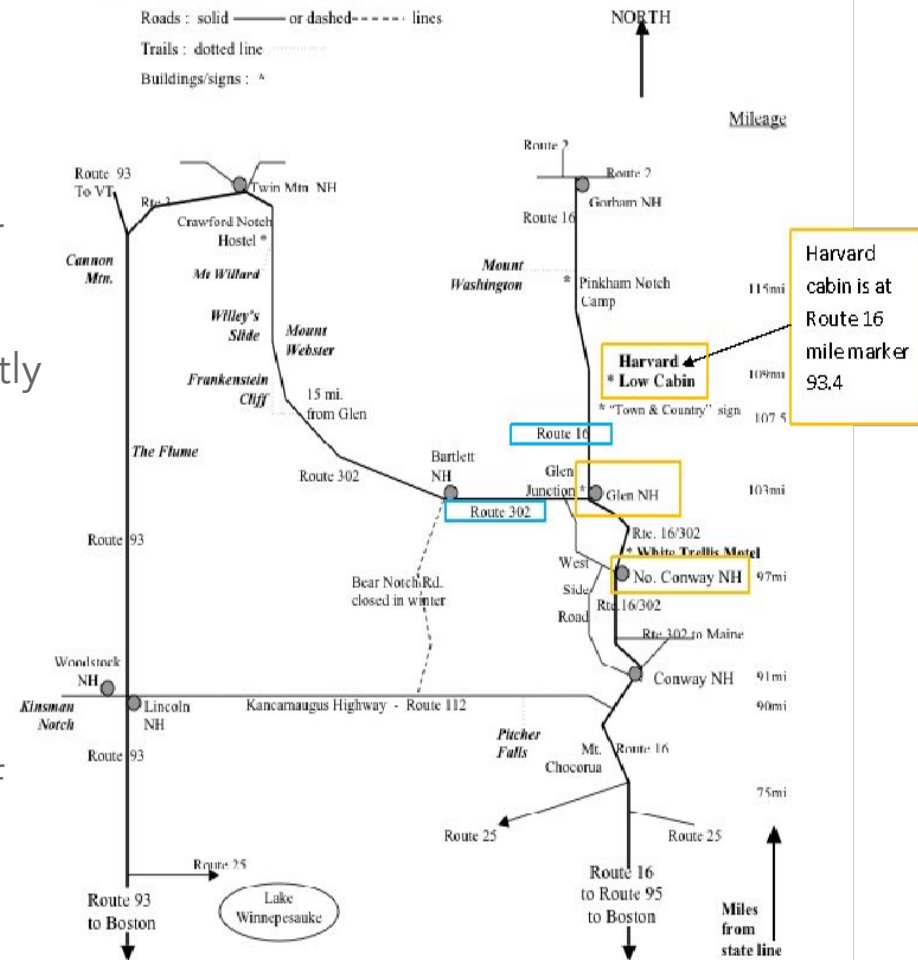
Directions to Harvard Low Cabin, and other important places:

Note: Ice climbing areas in *bold/italicized* text

Roads: solid — or dashed----- lines

Trails: dotted line

Buildings/signs: *



Logistics: The Harvard Cabin



- Students and Program Assistants must stay at the cabin
- Rustic facility — heat, electricity, kitchen, outhouse
- Loft sleeping arrangement — feel free to camp outside!
- Tight parking — be sure to carpool
- Shoveling snow / clearing parking spots and pathways
- Clean-up / LNT
- Carry-In / Carry-Out

Logistics: Cabin Gear

- You will be sleeping on a hardwood floor.
- Bring a sleeping pad / air mattress, and a pillow.
- Ear plugs help drown out your snoring neighbor and are highly recommended
- Slippers – no boots are allowed upstairs
- Water – The water is potable, but smells/tastes of sulfur

** See checklists at end of deck*

Logistics: Field Gear

- Boots and crampons (for ice climbing, not hiking!)
 - Rent/Reserve thru IME or NEM
 - Arrive in time to pick up and drop off! IME closes at 9PM on Friday, 6PM on Sunday (leave time!)
- Backpack
 - Bring a backpack to carry your own gear plus some club gear (ropes, webbing, etc.)
 - A climbing pack is ideal, roughly 2000-3000 in³, 35-50 liters
- Personal climbing equipment: harness, helmet, belay device, locking biners, headlamp, 1-2 slings, etc.
- DO NOT buy ice tools!!!

** See checklists at end of deck*

Logistics: Weekend One



Friday, January 25

- Limited parking! We'll send a carpooling spreadsheet in advance to help plan rides
- The Harvard Cabin will be open by 7PM
- If you are renting boots and crampons, ensure you arrive at IME in North Conway by 8PM
- Many meet at The Moat or the Red Fox for dinner on Friday night (coordinate via GG)
- We'll distribute ice tools at the cabin Friday evening.

Matt Sevey...keeper of the tools

Logistics: Weekend One



Saturday, January 26

- 6AM wake-up call
- 7AM all students due at Junction Diner for breakfast. Pro-Tip: Bring cash!
- 8AM carpool to the Arethusa Falls parking lot. Head to Saturday's training location (~25 minute hike)
- Rotate through skills stations to work on crampon technique, proper footwork/toolwork, self-arrest, ice screws, and CLIMBING!
- 4PM wrap up and head back to the Cabin.
- 6PM group dinner courtesy of our awesome assistants!

Logistics: Weekend One

Sunday, January 27

- 6AM wake-up call
- 7AM all students due at Junction Diner for breakfast. You will be assigned to a small group for the day. Our gear master will assign you new tools after breakfast.
- 8AM Carpool with your group to your assigned location.
- Development of your ice climbing foundation through direct coaching and LOTS of laps.
- 4PM wrap up, head home. Hang onto your tools.
- 6PM IME closes for those that need to return equipment (confirm with other outfitters).



Logistics: Weekend Two



Friday, February 8

- You'll receive an email inquiry about your climbing preferences for the second weekend
- The Harvard Cabin will be open by 7PM
- If you are renting boots and crampons, ensure you arrive at IME in North Conway by 8PM
- Many meet at The Moat or the Red Fox for dinner on Friday night (coordinate via GG)
- We'll distribute ice tools at the cabin Friday evening.

Logistics: Weekend Two

Saturday, February 9

- 6AM wake-up call (unless you're told earlier!)
- 7AM all students due at Junction Diner for breakfast. Students will be assigned a leader.
- 8AM carpool with students and/or leaders to your objective.
- Have a really awesome day climbing!
- 4PM-ish wrap up and head back to the Cabin.
- 6PM group dinner courtesy of our awesome assistants!
- 8PM stories, swag, and merriment



Logistics: Weekend Two



Sunday, February 10

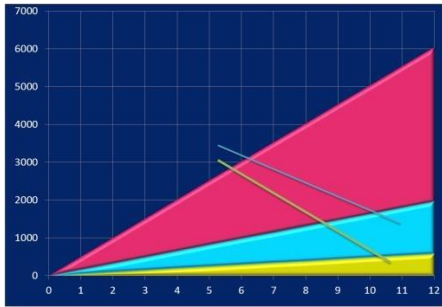
- 6AM wake-up call
- 7AM all students due at Junction Diner for breakfast. Students will be assigned a leader. Our gear master will assign you new tools after breakfast is over.
- 8AM Carpool with students and/or leaders to your objective.
- Have a really awesome day climbing!
- 4PM Check-Out Party! Attendance is mandatory! Return tools and head home.
- 6PM IME closes for those that need to return equipment (confirm with other outfitters).

Break Time!

Fuel: What to Eat and Drink

AMC Boston Ice Program

Fuel: Keys of Winter Food and Water



More Calories,
More Water



Keep Eating,
Keep Drinking



Easy Access



The Mitten Test



The Freezer Test

Fuel: More Calories, More Water

You burn a lot of calories just to keep your body warm, and you lose a lot of heat to dry, cold air.

Food

- You are what you (don't) eat
- Empty stomach = cold body
- Full stomach = warm body

Liquid

- You are what you (don't) drink
- Poor hydration = cold body
- Use insulated water bottles



Hydration bladders freeze in the winter!

Fuel: Keep Eating, Keep Drinking

- Eat well the night before
- Eat well the morning of
- Snack and drink at every break
- Small portions
- Easy to eat
- Warm liquids

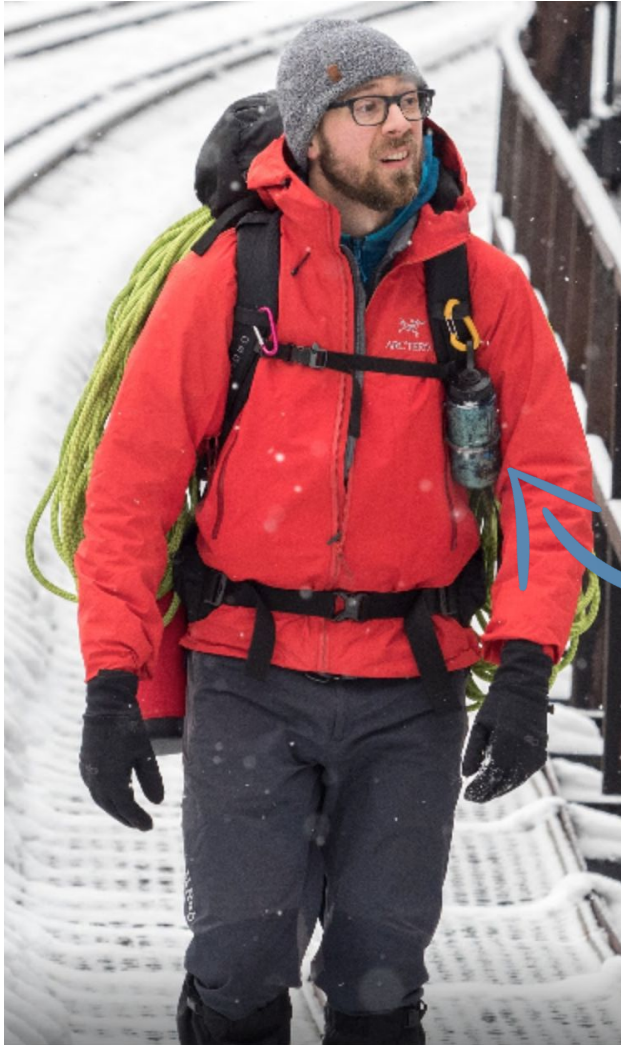
When we are cold:

- We typically feel a suppressed sense of thirst
- We are less likely to want to take a break to eat or drink
- Lack of food and lack of water contribute to hypothermia

Fuel: Easy Access

- Have a “food sack” that is easy to get to
- Hide snacks in all your pockets
- Bring a variety of things, always have something close by

Fuel: The Mitten Test



It's cold. And most of the time, we look like this.

Think about...

- Can I eat/drink this with my mittens or gloves on?
- Look, an easy-to-access snack!

Photo credit: Wil Hall (of Dan Riti)

Slide credit: Patt Grimm, AMC Winter Hiking Program 2019

Fuel: The Freezer Test



If you can't eat it straight out of the freezer, you might have trouble eating it out of your pack during winter

Sometimes all it takes is pre-cutting bite-size pieces, or keeping something close to your body inside a jacket



Clothing: What to Wear

Dressing for ice climbing: A battle against the thermometer

The ice climber's temperature scale:

30-40°F – Darn Warm. Go rock climbing.

20-30°F – Hero Ice! Get out and enjoy the day!

10-20°F – Typical day, dress warm, have fun.

0-10°F – Sure you want to be climbing? Dress warmer!

<0°F – Brrr! Why are we out here? The bar's calling...



Heat Management: Ways we *gain* heat

- From the outside:
 - Absorbing sunlight (Pro-Tip: Wear Black)
 - Drinking hot beverages
- From the inside:
 - Physical Exertion
 - Metabolizing Food
- We generate a LOT of heat!
- Majority of calories we consume are spent keeping us warm

Heat Management: *Ways we lose heat*

- Heat (energy) flows from warmer materials to colder materials, and quickly -- conserve your heat!
- Terrain steals your heat -> Don't sit in the snow.
- Wind steals your heat -> Stay out of the breeze.
- Perspiration steals your heat -> Avoid sweating.
- Breathing in cold air, exhaling warm air
- [UMich: Cold Exposure Article](#)

How to dress for heat when ice climbing

- Basics
 - Warm core + warm head = warm climber
 - Dress in layers for easy temperature regulation
 - Make sure your hat works with a climbing helmet
- Key points
 - Experiment until you stay warm without overheating
 - Carry extra everything
 - Don't be self-conscious



"Belay Warm, Climb Cool."

-- TB12

Clothing material properties

- Natural Materials:
 - Wool: Excellent insulator, semi-compressible, insulates even when wet
 - Down: Excellent insulator, highly-compressible, useless when wet (some good tech now, but still...)
 - Cotton: Mediocre insulator, not very compressible, useless when wet, impossible to dry – **DO NOT WEAR COTTON!**
- Synthetic Materials:
 - Polyester: Undergarments, base layers, and fleeces
 - Nylon: Outerwear external shell material. Tough, often coated with water-resistant compounds (Pertex, DWR)
 - Membranes: Outerwear internal vapor barrier material. Breathable, waterproof, and expensive (Gore-Tex)

How to dress for ice climbing – Tips

- Rule #2 of Ice Climbing: You will destroy all your clothing.
- Cheap pants. Cheap gaiters.
- Ensure your harness fits over your layers!!!
- Jackets should have helmet-compatible hoods
 - Hoods keep you dry when ice/snow/rain is falling
 - Hoods dramatically increase your warmth (extra hat)
- Hard shells vs soft shells
 - Hard shells are slightly warmer because they're less breathable, BUT you will sweat more in your hard shell...
 - If it's raining or very windy, you probably want a hard shell.
If it's raining or very windy, do you really want to be ice climbing?

How to dress for ice climbing – Brent's version



Lightweight
base layer
(make sure it dries
quickly!)



Mid layer fleece
(100-200 weight);
Additional pants
optional



Soft or hard shell
(helmet-compatible
hood is essential!);
Snow pants



AMC Boston Ice Program

How to dress for ice climbing – Stephanie’s version



Underwear;
Base layer tee
(synthetic or
lightweight wool)

Fleece base layer;
Long underwear
(wool or
yoga pants)

Synthetic jacket;
Expedition
weight bottom

Down vest (if
it’s really
cold)

Soft or hard shell
(helmet-compatible
hood is essential!);
Snow pants



How to dress for ice climbing – Belay jackets



Down

- Highly-compressible
- Relatively light
- Relatively expensive
- Worthless when wet!

vs



Synthetic

- Semi-compressible
- Relatively heavy
- Relatively affordable
- Insulates when wet!

"If you buy one piece of gear, it should be a belay jacket." -- Famous Belay Jacket Maker

How to dress for ice climbing – Gloves

- Good gloves will be...
 - Form-fitting, not too bulky
 - Have insulation on back of hand, not palm
 - Have no excess space at fingertips
- Wear fleece/liner gloves for approaches. They'll get wet but you'll have dry gloves for climbing.
- Bring at least 2 pairs of gloves for climbing.
- Consider specific gloves for belaying. Mittens/claws are okay as long as they have leather palms.
- Bring hand and toe warmers (for your hands). They're your best friends!

Gear: A Typical Climbing Kit

Questions?

Appendix: Equipment Checklists

Required Climbing Equipment Checklist

#	Item	Comment
1	Helmet	You don't get to ice climb without one
1	Harness	Make sure it fits over your layers
3	Locking Carabiners	Used for anchoring, belaying, etc.
1	Belay Device	Standard device required. GRIGRI's don't work well for icy ropes
2-3	Slings	At least one 48" sling for anchoring yourself and other things
2-4	Non-locking Carabiners	Can be on your slings
1	Prusik loop	For rappel backup
1	Backpack	35-55L
1	Headlamp	Make sure your batteries are topped off (they don't like cold)
2	Boots	Ice climbing boots
2	Crampons	Make sure they are pre-fitted to your boots
2	Ice tools	<i>Ice Program provides these for you</i>

Optional Climbing Equipment Checklist

#	Item	Comment
2	Gaiters	Useful on snowy days and to protect your pants
2-4	Ice Clippers	Very useful for racking screws and tools
1	Crampon Bag	Useful to protect things inside your pack
1	Micro Spikes	Very useful on icy approach trails!
1	Tools / Spare Parts	For in the field repairs of equipment

Optional Miscellaneous Equipment Checklist

#	Item	Comment
1	Camera	Take pictures and share them! #amcice
2	Hand Warmers	
2	Toe Warmers	
1	Sunscreen	Snow reflects sun, protect your skin
1	Goggles	Eye protection, most useful on Mt. Washington
1	Sunglasses	Handy on sunny days
1	First Aid Kit	Small kit probably sufficient
1	Set of spare batteries	For headlamp
1	Wag Bag	Shit happens
2	Car Beers	Your partner(s) will thank you!

Daily Clothing Checklist

#	Item	Comment
1	Shell pants	hard or soft
1	Shell jacket	Hard or soft
1+	Top midlayer(s)	Non-cotton; one or more, depending on cold tolerance
1+	Bottom baselayer(s)	Non-cotton; one or more, depending on cold tolerance
1+*	Underwear/sports bra	If you don't go commando, go non-cotton (also sports bra for women)
1+	Top baselayer	non-cotton; one or more, depending on cold tolerance and the amount you sweat on an approach
2+	Socks	Wool + liners if your feet sweat
4+	Gloves (+ Mittens)	Bring lots; they can get wet and the screaming barfies are awful
1*	Belay jacket	If you have one; if not, just bring lots of extra layers

** Not required*

Cabin Equipment Checklist

#	Item	Comment
1	Sleeping Bag	0 – 20 °F bag. Friday nights are cold, Saturday night is typically warmer.
1	Sleeping Pad	You'll be on the floor
1	Pillow	It's a cabin, not a cliff.
2	Ear Plugs	25 people in a loft, someone's going to snore.
1	Gallon of water	Cabin water is safe but tastes like sulfur. Bring your own.
	Alcoholic Beverage	If you're of age, you may want to indulge (a little) while at the cabin
2	Slippers	No shoes upstairs; bring something comfy to lounge in