Videos on Excursion Trips

STS has four excursion trips scheduled this year. Excursion trips are outside our "normal" area (VA, MD, WV, PA), as defined by the PATC Executive Council and require prior approval by the Executive Council and participants being PATC members and filling out PATC liability waivers. If you haven't skied in these locations, there are links to videos from past trips below that will give you a good idea of what they are like.

- White Mountains of New Hampshire
- Lapland Lakes, ADK, NY and in 2022
- Bend/Sisters, OR
- Maine Cabins and Hut-to-Hut and in 2023

and check out the Photo Gallery on our website for all trips.

Joe Bachman on the Mt Willard Trail, NH

On Buying New Skis

by Greg Westernik

Tis the season for thinking about getting a different pair of XC skis. This message expands on a similar one I sent last Feb. 2023 (which is reprinted below), except here I assume:

a) you want to use your existing XC ski boots or new ski boots on a different pair of XC skis,
b) you are using wax-less skis,
c) budget is not an issue and
d) you are a RECREATIONAL type of XC skier [not so much a backcountry, telemarking, ski skating, ski racing XC ski type).

For the purpose of this article my assumptions mean you are seeking different skis that support one of the following kinds of XC skis:

Classic and Compact Touring Cross Country Skis—This is the traditional style of cross country skiing and is easily recognized as standard cross country skiing. If you plan on sticking to groomed trails with mostly hard packed snow this is the style of cross country skiing for you. Mostly done on trails found in parks, golf courses and ski resorts classic and compact cross country skiing is great for recreation and exercise and can be done by all ages.

Classic Touring Cross Country Skis—Classic cross country skis offer a longer length than most new age cross country skis and will be sized by height. Most commonly used on the groomed tracks, but do offer wider tips and wider waist widths that will offer you more support and stability on the ungroomed terrain, but are not as wide as Backcountry skis. Groomed/Ungroomed skis are still narrow enough and agile enough to glide fast and efficiently on the track.

Compact Touring Cross Country Skis—Compact cross country skis are very similar to classic cross country skis but are a bit shorter and fatter than classic skis. These skis are great for classic cross country skiers that want a bit more control in deeper snow and tighter situations. Compact cross country skis are sized by weight; for sizing of compact cross country skis please see our cross country ski sizing guide.

I realize some XC skiers are looking for different XC skis that support other XC skiing types such as ski skating, back country skiing, etc.. Below a few words on backcountry skiing, often done by XC skiers who identify doing ski touring.

Backcountry Cross Country Skis—Backcountry cross country skiing is done in deep, usually non-groomed snow and usually calls for making your own trail. If you're in an area that gets a lot of snow measured in feet (e.g., Colorado, Bend OR) and rarely offers groomed trails this would be the type of cross country skis for you. Backcountry skis are often beefier and are sized a bit smaller than classic cross country skis. Some backcountry cross country skis also offer metal edges for even more ability to tackle difficult terrain. Backcountry skis are sized using height and can be specific to what exactly you plan on doing with the skis. Backcountry Cross Country Skis are best used for breaking your own trail and seeking out your own adventure. Backcountry Cross Country skis are typically shorter, stiffer, stronger and wider. Having a shorter ski will allow you to have more maneuverability when cruising through the woods. A stiffer and stronger ski is required because you will be breaking your own trail, and these skis will deliver more power in the deep snow. Having extra width will provide you with more surface area to allow you to stay on top of the snow to move faster, easier and more efficiently. Skis with extra width do not typically fit in groomed tracks. Backcountry Cross Country Skis typically have metal edges as well. Metal edges will give you more support and control on short downhills, and some control on icy slopes.

So buying a different XC ski depends somewhat on what kind of XC skier you are/ intend to be....and your XC ski ability.

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Buying Skis (cont.)

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In addition to knowing what kind of XC skier you are/wannabe, buying/renting a different pair of skis means you have to : (1) buy/rent a pair of XC ski bindings that are compatible with the type of binding on the sole of your existing XC ski boot, (2) buy a pair of different XC skis that provide you with at least the optimal balance of grip and glide + acceptable edge pressure control, and (3) decide how much control you want when XC skiing on icy slopes .

POINT #1—Every different pair of XC skis will need to have its own XC ski binding whose binding type matches the binding type on the bottom of your target XC ski boots. If the place you choose to buy different XC skis DOES NOT have already in stock the binding type you need, most likely you will not be renting to buy a different pair of skis that day at the ski touring center (STC) ...and you might not even buy any skis at that STC until they do. So call ahead to verify how many of the bindings for the type you need are currently in stock at your target STC before you decide to make the trip to the STC.

As you may know there are various types of cross country skis available. Some models come with bindings and some do not. The models which come flat, or without bindings, can generally accept any model of bindings. There are at least 7 different primary groups of binding systems used in modern cross-country skiing as listed in table/chart next.
Older styled three-pin bindings (Nordic Norm), with or without cables, are still used by backcountry and Telemarking enthusiasts as a binding system.

With the release of the Turnamic system, featured on 2018+ Rossignol and Fischer products, and the ProLink system, featured on newer Salomon products, there's much more crossover among boots and bindings. Turnamic, ProLink and NNN are all interchangeable with one another. The chart below will help you understand which bindings are available to you based on the types of soles on your boots.

Boot and Binding Compatibility	
Boot Sole Type	**Compatible Bindings**
NNN	NNN, NNN Nordic Integrated System (NIS), Turnamic, ProLink
NNN BC	NNN BC
3-pin 75mm	3-pin 75 mm
Turnamic	NNN, NNN NIS, Turnamic, ProLink
ProLink	NNN, NNN NIS, Turnamic, ProLink
SNS Profil	SNS Profil
SNS Pilot	SNS Pilot

Both NNN and SNS binding types have variants that follow "BC" (back-country) standards, where the toe hold in the binding is wider and the bar in the boot's toe is longer and thicker in order to give further lateral rigidity. This added strength and rigidity is especially important with the stiffer boots and heavier skis favored in backcountry skiing and better Nordic downhill control. There is also a new boot and binding system out now - Rottefella XPlore. It's positioned in between 75mm and NNN-BC, giving more control than NNN-BC but keeping system efficiency and an under-toe pivot. It uses two separate pins on the side of the boot outsole.

The existing variety of binding systems, none of which are compatible with the other, has long since been a source of frustration by skiers ever since manufacturers diverged from the almost universal three-pin standard. Whereas downhill skiing has a common binding system allowing any boot to work with any binding short of the dynafit-system, modern cross-country skiers must match the skis' binding system to the boot type. When it

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Buying Skis (cont.)

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is time to change the boot, the skier must either be limited to boots of the same binding system or also change the skis' binding

Added Notes on Binding Plates Found On Newer Skis With Respect To NNN Boot/Binding Systems—Some newer XC skis come with binding plates installed on them. These offer several advantages, including quick and easy binding installation without drilling and the ability to reposition the bindings forward and back based on things like snow conditions and skiing ability. If your skis have plates installed on top of them, to leverage that plate you need to buy compatible bindings. For instance, skis with NIS plates on them are designed for NNN NIS bindings. Likewise, skis with Integrated Fixation Plates (IFP) are designed for Turnamic bindings. In some cases, you may be able to put other bindings on binding plates either by drilling through the plates or purchasing adapters, such as the Salomon IFP Adapter Plates that allow ProLink bindings to go on IFP plates. While I have installed NNN BC bindings on top of NN NIS binding plates, this choice is not for everyone.

The Nordic Integrated System (NIS) allows for quick and easy binding installation directly onto the ski, without screws—simply "click-on." The binding is based on NNN technology so that all NNN boots (regardless of age) will fit the binding. Most new XC ski equipment is selling this type of binding on the XC skis. Unlike the 3-pin and NNN binding systems, NIS has **full integration between ski and binding.** The tight contact between the ski and the binding improves stability, ski control and kick. This binding system has a broader binding plate for added stability when skiing. NIS system has a special composite plate that is permanently bonded to the cross country skis, eliminating the need for screws that compromise the strength and integrity of a ski. The movable ski binding securely "clicks on" the ski's bonded NIS plate, offering the skier with the flexibility to alter the xc ski binding's position on the ski for universal fitting of a range of boot sizes. NIS skis have plates on the skis that allow the ski to have a more even and deeper flex over the ski that is beneficial if you will encounter lots of small rolling hills on the trail. Skis that have a NIS Plate already attached to the ski require a NIS binding that is sometimes included with the ski. If the binding is not included with the ski you must make sure that the binding is NIS compatible. NIS bindings require you to simply slide the binding on to the plate and they lock into place.

POINT #2—How does one buy a pair of different XC skis that provide you with at least the optimal balance of grip and glide + acceptable edge pressure control ? You do not want different pair of skis to grip poorly on inclines or glide poorly in the flats and downhill portions of the tour.

Some skiers have a sales person or ski buddy help perform a manual "paper test" while the skier is standing in their ski boots and has a pair of different skis installed on each of your boots in a dryland area. As the skier weights then unweights a ski, the sales person / ski buddy sees how the paper moves or not on the underside of each ski between the grip and glide zones.

Next step for buyer in POINT #2 is to do a trial use of the target skis on actual snow conditions like in a ski rental situation. This dynamic method will provide even more confidence on the strength and weakness of each different ski with respect to goals like optimal grip/glide, acceptableness of edge pressure control, stability on the snow, etc. This dynamic approach is may only be performed at SKI Touring centers like Whitegrass STC in WV.

POINT #3—While most XC skiers sooner or later glide their XC skis on an icy portion up or down a ski slope portion of a tour, some XC skis may handle icy slopes better than others. For example, 1 different pair of XC skis may have metal edges that will under the right edge pressure give the skier a better chance at controlling your ascent / descent on an icy slope portion of your tour. While another different pair without metal edges will be more problematic controlling skis on icy slope portion of tour.

Below is a reprinted copy of Part 1 of this subject mentioned last February 2023.

STSer on a XC ski trip inevitably find someone raises questions like: *"What length of nordic ski do I need?"*, or "*How long should my nordic skis be?*", or "*How do I choose my XC ski length?".*

To me responses to these kinds of questions are NOT as easy to generalize as one may think. To simplify my response and in hopes of getting more useful feedback from our fellow STSers on my omissions and errors, my first response will address try to limit the scope as follows:

How To Select The Best XC Classic Skis / Correct XC Classic Ski—Notice I am NOT TALKING in general about skis for other different types of skiing such as ski skating, telemarking, backcountry skiing. Some other author will have to jump into skis for these other types of XC skiing than this article. The right length ski is an essential factor to really enjoying classical XC skiing. Control, turning, climbing, gliding and stopping will all be more precise with less effort. Boots and bindings one selects also play a role in these matters. At least the following factors need to be considered for ski length.

- Your height and weight
- Your ability level
- The type of skiing you expect to do
- Your budget

There are no end of videos on choosing correct XC skis (e.g., McBike explains how to select the correct length of xc ski). I am unsure there

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Buying Skis (cont.)

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is a specific, exact standard for skiers to reference. All tables and charts are just guidelines. You might receive a recommendation in some table that you find is not the best ski for you. But it will definitely be a starting point.

You should consult the manufacturer's recommendations. **Your weight** will affect the amount of choices you have, leaving you with around **3-4 pairs of different lengths to choose from**. Ultimately how the ski performs when you do a trial use on the snow (turning, gripping versus gliding) may best indicate what ski is best for you.

It is said that ski length has no relation to gender. The only time gender comes into play is in the flex of the ski, which needs to match the weight of a skier at a certain height. The position of the binding on the ski may also different for men and women.

Let's look at **basic length guideline** for skiers based on ability levels according to Fischer Sports. Note that skis are always sold in centimeter lengths:

Beginners: Height minus 10-15cm
Advanced: Height minus 5-10cm
Expert: Skier's height and up to 5cm longer

Another Tabular Approach To Select XC skis (à la REI) with some variation for classical vs. skating vs. ungroomed touring:

	Ski Length (cm)		
Skier Weight (lb)	**Skating**	**Classic**	**Touring**
100 - 110	170 - 180	180 - 190	160 - 166
110 - 120	172 - 182	182 - 192	160 - 166
120 - 130	175 - 185	185 - 195	170— 176
130 - 140	177 - 190	187 - 200	170 - 176
140 - 150	180 - 195	190 - 205	170 - 176
150 - 160	185 - 195	195 - 210	180— 186
160 - 180	190 - 195	200 - 210	180 - 186
180+	190 - 195	205 - 210	190 - 196

Remember, two of our critical factors are missing; and the same skier would not necessarily want or need the same length touring ski as carving ski, for example. Some authors would argue that the skier's weight is not a factor in ski length. In general, that approach claims one should choose a ski with a higher flex rating. For me, weight is a factor in skis I select, all other factors equal.
Height is a good indicator of the proper cross-country ski, because we can really narrow down what the ski is being specifically used for.

- Classic skiing on a groomed track: Height plus 20cm
- Classic cruising on open terrain: Height

Skating: Height plus 5-10cm

Body weight is also a factor in cross-country ski selection since the glide phase is so important. Relatively **heavy skiers** should add 5cm from the recommendation above. Relatively **light skiers** should subtract 5cm from the recommendation above.

Other Possibly Helpful Calculations:
For Classic: Your Height in Inches x 2.6 + 15 = Approximate Classic Touring Cross Country Ski Size
For Skate: Your Height in Inches x 2.6 + 5 = Approximate Skate Ski Size
For Backcountry: Your Height in Inches +/- 2 to 6 Depending on Skill Level, Use, and Specific Skis

Reasons to size your skis shorter, closer to your chin:

- You are a beginner or intermediate skier
- Your weight is lighter than average for your height
  You like to make short, quick turns

Reasons to size your skis longer, closer to the top of your head:

- You are skiing fast and aggressively
- You weigh more than average for your height
- You plan to do the majority of your skiing off the trail
  You are purchasing a ski with significant rocker in the tip

A shorter ski will be easier to turn yet not as stable as a longer ski. **Longer skis have more stability and float better in snow**, but they also have a larger turning radius. Shorter skis sacrifice stability (especially at speed) but are quick to respond and easier to make short sharp turns. Short skis turn faster but long skis go faster.