

# Paul Kirtley's Blog

Wilderness Bushcraft • Survival Skills • Outdoor Life

Paul: This is the Paul Kirtley Podcast, episode six.

[music]

Voice Over: The Paul Kirtley Podcast. Wilderness, bush craft, survival skills and outdoor life.

Paul: Welcome to episode six of my podcast. And unlike some previous episodes, in this podcast, I am on my own. Well, at least largely on my own. Now listen to this.

[Sami yoik song]

Paul: That's the sound of Per-Eric Coleok [SP], a Sami man I met while in Sweden recently. He is singing a yoik, a traditional form of vocal musical expression, unique to the Sami. And if you're not familiar with the Sami people, they're Europe's northernmost group of indigenous people. Their traditional land spans the borders of Sweden, Norway, Finland and Russia, right up to the top of Europe in Fennoscandia. I had a very interesting discussion with Per-Eric, some of which I was able to record and I'll be sharing that with you later in this podcast. Also, you'll be able to hear some of his yoik.

But first you might be wondering what I was doing up there in the far north of Sweden? Why was I there? Well, I have a love of winter wilderness travel, whether it be by snow shoe, ski, snow machine or dog sled, I have a real passion for winter forest environments, particularly the boreal or northern forest, also known as the taiga, to use the Russian term. It's a huge circumpolar band of forest, which goes right around the northern hemisphere and I have to admit its vastness fascinates and attracts me.

It's a fantastic natural environment for anyone who loves getting out into nature and it's stupendously beautiful in winter. In those winter conditions, it's a lovely environment to travel through and spend time in, if you know what you're doing. So, it was that I was in the north of Sweden with some friends on a two-week winter trip, and this is something we really enjoy and we do as often as we can.

My preferred way of spending time there in winter now is living out of a heated tent. One of the most popular articles on my blog actually is a guide on how to live out of a heated tent, and I'll put a link to that in the notes under this podcast on my blog. As well as that article I've written good amounts on other aspects of winter camping, winter bush craft and winter survival skills, and I've also added videos to my site and to my YouTube channel. So it's natural that I tend to receive a fair few questions about those areas.

I think it's a little bit unfortunate that some people tend to see these winter skills are somewhat more complicated or advanced than the skills needed for summer outdoor life. I think there's quite a lot of overlap in the core skills using axes, lighting fires, navigating all those sort of things but in some ways winter can be more complicated. It can certainly be more unforgiving and yet definitely more likely for you to be punished for taking shortcuts rather than doing things properly the first time

But in other ways it's more simple when you're winter camping. You have a pretty straightforward, standard routine that you have to maintain to make sure you're safe, warm and comfortable. Of course, in winter, you've got relatively short days, so you've got to get into a good routine to make sure that you make the most of the hours of daylight that you do have.

So what I'd like to do in this podcast, in the first part of this podcast, is to share some fundamental winter camping and winter outdoor life tips and before the seasoned winter campers jump down my throat, I would say this is meant to be more about laying the groundwork of solid principles, rather than examining every single minute detail. Clearly, books can be written on winter camping and hot-tenting and snowshoeing. That's not the intention here but it's to give a broad set of principles that people can apply, pretty much whatever they're doing in the winter forest environment.

But first let's just consider the basics of what you need for winter camping with a heated tent. There are some things that you need over and above a summer camping setup and primarily that's the tent setup itself. Traditionally, a canvas tent and these days, there are two main styles that people use, the traditional A-frame style of tent or a more teepee, conical shape of tents, and there are good manufactures of both. Tentipi make good conical tents and Snowtrekker make very good A-frame style tents.

Then you're going to need a stove and the manufacturers generally do offer wood-burning stoves to go with the tents but there are other manufacturers as well. So it's worth having to shop around and finding the stove that suits your needs. Often it comes down to weight and space that you have available depending on the mode of transport that you're using.

Then you might need some ground cover or tops and we tend to use the canvas tops that go over our toboggans as a ground sheet layer inside the tent. You may use that system, you may use a different one but you want something that's going to go between you and the snow underneath. Typically the tents don't have a base in them. They don't have a bottom in them like mountain tents so that you're going to need to put something down on the ground.

Then you need some sort of transport as well, snowshoes, and a Toboggan is typically what we use and but you might be traveling by snow machine. You might at other times of the year be keeping these tents and stoves in the back of a vehicle in a quite flexible setup and are really nice for camping in cold or wetter conditions in the autumn and the spring as well. So think about what you need how you need to carry, how you need to transport.

Certainly all of the setups with canvas tents and stoves, they're not a backpacking setup. You are not going to be carrying the stuff on your back. You need to haul it in a pulk or a sled or a toboggan or take it in a trailer on the snow machine or the dog-sledding setup as well. That's something you're going to carry with you as part of your transport and camping system. You're not going to carry it on your back. It's all too heavy. That's just something there for the beginners. I've been asked that a few times.

None of these setups are going to be lightweight enough that you are going to be able to carry on your back and generally in winter when you're skiing or snowshoeing, you don't really want a huge amount of weight on your back. Once you get a certain weight, you want to be using the toboggan with your snowshoes or a set of skis with a pulk.

Okay, now another question I get is. If you're using a heated tent, does that mean then you can take a lighter weight sleeping kit than you would need if you were sleeping out in the forest. And my view is that, that's a definite no. You've got to take good sleeping kit regardless. People sometimes are under the impression that you don't need to do that. My view, and I'm reiterating here, is that you do. Yes, a heated tent is going to be warm inside and you might not have your sleeping bag done up.

You certainly might not be using the baffles, you might not be sleeping in as many warm layers as you are when you're sleeping outside, if you were sleeping out and under the stars. But if you don't have the stove going in a tent, by morning, or certainly before morning, it will be almost as cold inside the tents as it is outside the tent.

So you need a sleeping kit that will keep you warm at the prevailing ambient temperatures that you're likely to find. So take full winter weight sleeping bags, take a sleeping mat that's going to insulate you from the ground, insulate you from the snow and my top tip here will be to take a BEVEE bag as well, even if you're sleeping inside a heated tent because if you're not warming it overnight, it's going to get a bit frosty in there, there may be condensation particular between you or your sleeping kit on the ground.

If you've got all that contained in a BEVEE bag it protects your sleeping kit and particular your sleeping bag from moisture and frost and it also keep you and your sleeping bag a little bit warmer because there is a layer of air trapped between the outside ambient temperature and your sleeping bag. It also helps keep it clean as well. So there's lots of good reasons for having a BEVEE bag even inside of a tent when you winter camping. That will be one of my top tips there.

Before we move on to consider some other aspects of winter outdoor life, I think it's worth considering some of the objective dangers or hazards that you're faced

with when winter camping in particular and out in a cold environment. You do have to take care of yourself and your companions in a cold environment. You have to be more attentive than you are in warmer conditions and when you're winter camping there are risks that are not present or at least is prevalent when you're camping in warmer conditions.

So it's worth pausing for a moment and considering what these objective dangers are. This will inform both the choice of much of the remainder of your equipment selection, as well as how you behave and the decisions that you make while you are on your trip.

So the first thing I would highlight are cold injuries and particularly freezing cold injuries and that's frost nip and frostbite and your clothing to a large extent is going to protect you from the environmental temperatures, but self-management is more than just clothing. It's using the clothing properly, it's using it at the right time, it's making sure that you don't touch cold objects with bare hands, it's making sure that you cover up when there are strong winds, it's making sure that you stay well-hydrated, so that your circulation works as well as it can do.

It's about making sure the clothing is not too tight so that circulation isn't restricted. And again, there are some articles on my blog with respect to cold injuries and I will link to those in the show note. But cold injuries are a big one.

Also an allied risk in cold environment is hypothermia and that's something that people going into cold environments do worry about, more than people going into milder environments. But if you look at it statistically, people are most likely to come down with hypothermia between about minus six degrees Celsius and plus six degrees Celsius and that's because that's where you get wet, wind and cold altogether.

In colder environments, they're typically dryer and you may have wind and you may have cold, but it's not going to be so wet and being wet is a real issue. So if you can stay dry, don't sweat too much, don't work too hard for the number of layers you're wearing and if you're going to work hard, delay before you start working hard, so you don't get sweat into your clothing. Manage yourself, make sure you ventilate as much as possible. Change your headgear, so that you cannot again are not getting too hot.

All of these things can help you manage not to get too hot and not to sweat and therefore not to get wet because the environmental moisture in really cold conditions isn't really present. Yes, it's there in snow, but it's very dry snow. The air is pretty dry, so your real risk with hypothermia is either falling into water or getting wet in another way. So if you manage yourself well and stay well fed and put on warm layers when you need to, when you stop activity that goes a long way to making sure that you stay at good temperature. I would say you're more at risk of cold injuries and hypothermia in really cold conditions or at least they're going to present themselves first.

At the opposite end of the spectrum when you're winter camping, hot stoves are a risk. And you've got a hot metal box that is running and it can run to almost red hot inside a small, confined space with people moving around and you've got liquids on top, hot liquids, again in a confined space. All of which, you and the stove, is on a floor which is not solid. Typically, you've got a compacted snow base underneath your tent and again if you want details of that, have a look at some of my articles about living out of a heated tent.

But you do need to be careful moving around near a stove, in clothing near stoves, particularly synthetic clothing can very easily be melted on hot stoves and you can damage sleeping bags, you can damage duvet jackets, you can damage GORE-TEX jackets and GORE-TEX trousers and rubber boots can all be damaged. So do be careful around hot stoves and clearly if somebody falls on to a hot stove that's running hot, there's going to be some really severe burns.

So you do need to take extreme care in close proximity to those hot stoves. And just handling the stove as well, opening and closing the door, moving hot pans, you don't want to be burning yourself. So use gloves. Use the right things so that you're protecting yourself. Don't take chances.

Another allied risk to having a stove running inside a confined space is carbon monoxide poisoning and you can take a carbon monoxide meter with you that has an alarm on it, that will go off but one of the things that I make sure that doesn't happen is that the stove is left unattended. So if we run the stove while people are sleeping, somebody stays awake to monitor it, to keep it running. This is typically with a wood-burning stove, you are going to get carbon monoxide poisoning when

you also get smoke and coming into the tent and wood-burning stoves are pretty smoky.

So the risk I think is when the stove is damped down, you get winds blowing across the top of the chimney and that pushes the smoke and carbon monoxide back into the tent. That said, I just wouldn't risk it. Either burn the stove out before you go to bed if you all want to sleep. Make sure it's not running while you're sleep. Otherwise if you want to keep it running overnight, if you've got a particularly cold night, and you want to keep it running, have a fire watch, taking turns to watch the fire, but don't leave it running overnight without somebody watching it.

Then is another reason for that as well, it's not as likely. I've not heard of it happening very much in recent years and that's partly because canvas tents these days tend to have a fire retardant treatment but a tent fire is not outside the realms of possibility. You've got hot stoves, you've got hot metal, you've got a hot chimney, which goes out through an aperture, surrounded by canvas, which can also get quite hot and anybody that's made charcoal will know that natural materials if you heat them up enough will char and you can set fire to them quite easily.

The same goes for canvas tents and one of the things I would make sure to do is to make sure that you don't have all of your equipment and clothing inside the tent because if the tent sets on fire, you're going to need to get out quickly. Always have a knife to hand so that you can cut your way out rather than have to go out through the door. Go out through the nearest wall and have some things outside. What you don't want to be doing is running straight out into the depths of the cold night in your underwear and then freezing to death outside. So think about that. It's a low possibility I would say, but it is a possibility.

Then the other thing is involved with moving around in a winter environment, particularly if you're going to use traditional routes of travel on snowshoes particularly, is falling through ice on frozen lakes and rivers, and that's something you need to be particularly off at either end of the season and more on rivers where there is moving water at any time of the year and some of that comes down to experience. Study the map and look at where there are constrictions, look at the

contour lines where the river may be flowing faster, it's going to have more chance of staying open.

And not to be underestimated, speak to the locals. Local knowledge of areas that are always open are the areas that we go to in Sweden. We know that they're always open, we know that the water is always open there, but we were first told about them by the local people. They said avoid that outflow of that lake, it's always open. Avoid that part of the river, it's always open, that there are rapids there in the summer and the ice is not safe there.

So speak to locals if you can, understand how the water flows, if you're with canoe stick [SP] can help to understand how the water can affect the ice in the winter as well look at the map and take care. That's the main advice there, but it does come down to experience and I would suggest that you go out with somebody who knows what they're doing, that has the requisite experience and learn from them first, how to assess the ice as you go.

I mentioned clothing a little bit earlier. I think it's worth expanding on some of these principles and I'm not going to go into all the different parameters and possibilities and permutations with clothing. Everybody's got their own preferences when it comes to the detail but there's some general principles that are worth sticking to and worth knowing about in terms of being out and about in the winter.

The first thing to think about is that some of your winter clothing is going to be specific to the winter. You're only going to be using it in the winter, but other items may be used in other times of the year. So again if you want to extend into winter camping, it doesn't necessarily mean that you have to go out and invest in a completely new outfit.

Also think about some of the things we talked about earlier. You'll be around hot stoves and handling rough logs for firewood and so it can be worth investing in good quality leather finger gloves and good quality leather mitts. Leather is much more durable and resistant to damage from heat than modern synthetic gloves that may be designed more for the winter mountaineering and skiing.

Winter clothing principles are fundamentally quite simple, particularly if it's a cold, dry environment rather than the damp cold you get just around freezing point. You



need good base layers. Merino wool is generally best for long-term use as it's both comfortable and it doesn't smell like a synthetic base layer does after only a few days. Several thin layers are better than one heavy one. You can also have some warmer layers for your upper body and maybe a thicker a set of long johns if you need them. And then have good shell layers.

So have good set of trousers that are going to block out all the wind and keep the air trapped in your base layers underneath and have a good smock that's going to go over the top. Some people prefer synthetic materials. Personally I prefer a cotton smock. I use a Ventile smock, which is quite large and that again means that I can get all the layers I want underneath it, and it means that I'm not restricted in my movement, which is good. It's not tight and it's protective. That's something that I really like with a good hood and if you want to have a fair rough on it as well that makes a big difference in cold conditions, keeping warm air trapped near to your face.

Have various different hats from a light beanie through a medium white cap possibly with some ear protection through to a heavier hat. So that again you can regulate your temperature with different hats .At times you might be sitting relatively still, other times you might be working hard, pulling a toboggan or chopping wood. So you want to vary what you wearing on your head. It makes a big difference to how warm you are.

On to boots. One key principle that I can't really emphasize enough is that tight boots mean cold feet. If your boots are too tight, the circulation will be restricted and your toes and maybe the whole of your feet will be cold. So you need boots with a good foot space and preferably get some lined boots. So these are going to be something that's specific to winter use, something with a felt liner and I would strongly suggest that any liner is removable.

Don't buy boots with GORE-TEX or breathable liners built into them with thermal stuff built into them that can't be removed because it holds moisture, it can hold ice and it's very difficult to get them dry in a reasonable period of time. So it's much better to have a boot that's like a shell and then have a liner that comes out and you can you dry them the whole lot out much more easily. We'll talk more about drying clothes in a little bit.

So that's one of my top tips, removable liners and not just for your boots either, if you can get good quality gloves and mittens with removable liner, so the shell is separable from the inner then with both your boots and your gloves that means a couple of extra things as well as being able to get them aired out and dried out to the end of the day more effectively and more efficiently. It means you can swap out damp for dry versions midway through the day. Now you're more likely to do that with your gloves than with your footwear, but it's a possibility.

And I carry spare felt liners for my boots in I case a step into water and get wet feet and I also carry spare liners for my finger gloves and I carry a spare set of mittens and it may sound excessive but you do not want to be getting freezing cold injuries. My hands are very valuable to me. I use my hands in my job in many different fashions. I do not want to be losing my fingers. I do not want to be losing my toes, so very good quality boots and gloves for me are a must. I make sure that they've got removable liner, so you can air them out and make sure you've got spare mittens and spare liners.

Another top tip when it comes to hands and feet are having some tent booties. These can be duvet booties or similar that can be worn in the tents but can also be worn for short trips outside of the tent such a going for a pee, brushing your teeth, checking out the northern lights, whatever it is, but it means you don't have to put your main boots back on every time you want to just nip outside

And remember if you've made a bit of a tent platform and it's frozen you will have something that, maybe not immediately but after a little while, you'll be able to walk on with your boots anywhere. You're not going to need to be putting snowshoes on. You're not going to be stepping outside of the tent straight into deep snow. So something on your feet that you can walk out onto compacted hard snow is really worth having.

That then means that you once you put your boots and the liners up to air out at the end of the day once you get them up as high as you can in the tent, we put a hanging line up in our tents that we can dry all of our stuff. Get it up high. It can stay there until the next morning. You're not having to take the thing up and down, introducing more moisture into the footwear. Once it's off, it's up there, use your tent booties to go in and out. You brush the snow off them when you come back in.

They keep your feet warm when you're in the tent as well, which is nice and it's a good simple system.

Now, I've alluded to it already but another top tip is to air your kit. You should air and dry your clothing and sleeping kits on a daily basis. Not necessarily your base layers because you're probably going to be wearing those most of the time but everything else. So set up a hanging line in your tent, right up high in the warmest air, high up in the tent. Warm air rises, cold air drops, remember. Get your gloves, mittens, socks, boots, boot liners. Those in particular are up there, plus anything else that may have become wet or damp or picked up moisture during the day and air your sleeping bag out every day if you can so.

If you're setting up your tent, and you've got it warm, get your sleeping bag up there when you first get out. Get some warm air through it. Drive out the moisture. That can be good things do or do that in the morning. If you've got the tent stove going, you've finished boiling the kettle and all of those jobs, which put out moisture into the tent and before you head out for the day, if you're leaving the tent up, get the sleeping bags up for a little while, drive out the moisture this may have from having slept in them overnight and they'll be in the good condition for you for the following evening.

In terms of preparing, also prepare everything for the morning the night before if you can. Remember you've got relatively long dark evenings in a winter tent, in a winter camping environment and you can take advantage of this time. I mean yes, you can read and you can chat and that's all so nice and you would some really good conversations while winter camping and I find I guess some of the best sleep as well, because unlike my time now when I'm recording this podcast, I'm right in the front of the computer, I'm looking at a screen.

When you're out in the woods and particularly in the winter it's dark early and by the time it gets to after dinner it's been dark for hours and hours and hours and your body reacts to that and you you're sleepy and you go to bed early and you sleep well and you sleep for a relatively long time because you've got long night. You don't feel obliged to wake up at the crack of dawn that happens very early in the summer. You can almost oversleep because it stays dark for long time. You get good quality sleep,

But equally you can make use of that time in the tent to be ready for the next morning because you've only got a short number of hours to make use of during the day. So prepare what you need for lighting the stove in the morning, get the kindling ready, and get the smaller fuel ready. You might need to split it out in the night before, stack it all up ready to go next to the stove, so you don't have to try and find it in the morning.

Heat water up in evening as well. If you've got some vacuum flask, heat some water up, put it in the vacuum flask for the morning. You could make, depending on what you've got for breakfast, you've got cereals and granola or porridge or instant porridge at least and instant coffee or tea. You could make everything you need for breakfast in the morning just from that hot water without relighting the stove if you need to get off really quickly. But even so if you got water ready to go rather than ice and snow, you are going get a hot brew and a hot breakfast quicker by keeping it in a flask overnight. You can quickly reheat up to boiling again in the morning if you need to.

And get up early is the corollary of that. If you get up early preferably for it really properly light, while it's still gloomy and you can get all that done, you can get the stove lit and the tent warmed up and the kettle on, all before it gets light and getting the kettle on straightaway straight away, starting making breakfast. That only takes one person. So your pals can have a little sleep in if they want to. They can have a lie in and there's nothing really much nicer than being woken up to warm tents and a hot cup of tea or coffee while you still in your sleeping bag. That's a real luxury and that's something you can do for your companions and you can take in turns to do that and that's a really nice thing to do.

If you're up and fed and watered early enough then you can make full use of the day whether you're packing down camp or moving on or heading out for the day into the forest, you use your camp as a base sometimes and head off for a day trip. If you get up early, get breakfast sorted, get everything done that you need to, before you head out, before it's too light then you're making full use of the daylight when you've got it.

That brings me onto the subject of what you might take with you on a day hike. Again, this is a question that I've been asked about. If you think about in summer,

the day hiker is less well-equipped for spending the night out than the multi-day backpacker with all their sleeping kit and it's the same in the winter.

The same goes for winter conditions. If you head out, often use snowshoes for a side hike, leaving behind you your tented base camp and the bulk of your equipment and your food, you're more exposed than when you're holding your toboggan or your pulk or your sled with what is effectively your full winter life-support system. So the prudent snowshoer who goes off on side trips takes a few things with them. We will cover what they are shortly.

One thing to say is that when I go on these multi-day trips and I've got a toboggan and all my kit, I always take a daypack with me. Now that's not something that I carry on my back when I'm hauling a toboggan, and that's not something that is really practical for multiple reasons. So it's packed away in my toboggan, normally empty and it packs flat and then when I'm in camp and I want to be able to carry things out into the woods with me or even bring things back from the woods with me I've got a daypack that I can use and typically I take something that's around 40 to 45 liters but is relatively lightweight, so there is a good volume.

You always want a good volume for backpacks whether it's daypacks or larger in winter because everything is more bulky, all the clothing is more bulky, you've got less dexterity because you've got gloves or mittens on. Everything is hard, it's packed down. So just having a good amount of space even for a daypack means you're not having to puff around, having difficulty getting things closed and packed down properly. So take actually often my 45-liter main pack that I use for summer backpacking without side pockets on. I use that as a daypack in the winter.

Before I go through what you might put in that daypack when you're heading off, just a note on what I have on my person anyway. I've always got the following things on me. I've got a small sharp knife, I've got matches, I've got fire steel, I've got a small pocket sharpening stone, I've got a small first aid kit or a cuts kits, I've got some power cord, probably a phone, I've got head over or buff made of wool, I've got a balaclava and a compass and a map of the area. Those are all typically in my trouser pockets or my smock pockets, a lot of them are on my person all the time.

Also, I have a leather belt, which goes around the outside of my smock and on that I attach strong fixed-bladed wilderness knife that's got a lot of strength behind it, a folding saw, a typical folding saw that everybody uses these days, the Bahco Laplander. I take a traditional wooden cup that's well-known as a kasa in Sweden or a Kuksa in Finland and I've also got a little pouch containing some useful items that are sort of fiddly to keep in other places and also often handy to have on your person.

I've got a Leatherman, which is used for fixing bindings, snowshoe binding, ski bindings anything like that. Also useful when you're on snow machines, particularly two-stroke snow machines that and you can take out spark plugs and what have you with them as well. Also useful for making snares for having the wire cutters.

I have the field dressing in there. So a larger dressing, it's always good to have a larger dressing if you're using an axe. I've some fire lighting paper in there, some barbeque fire-lighting paper which is very easy to get hold of in Scandinavia. So I have some means, some tinder and now at least can have strips of Birch bark in there if you wanted, I've have a mosquito head net in there and if you don't know why I carry that, have a look at my water generator video of producing water without any cooking pot.

I keep some snare wire and fishing hooks in there as well. Now, I'm not going to be able to go fishing without some means of getting through the ice. So it's an isoga [SP] but I like to keep them there so I know where they are. I'm not gonna stick my fingers on them. They are in the little packet inside the pouch and I've always got them there. So if I do go ice fishing, I've got them handy. So that's my typical on-person kit, things I've got my pockets and things I've got on my belt and they're useful to have in the winter forest environment all the time.

Now from heading off for the day, there are some things I make sure I have and at least the following would be with me in a daypack that would be lined with a dry liner to keep everything dry. So a large duvet jacket is really important, something that you can put over the top. We sometimes call it a "mothership" that can be a large down duvet jacket or a large synthetic duvet jacket. I often use an old Swedish M90 overcoat because it's long and it really protects your cold, not

something I'll use for a ski touring or something that required lighter weight but I like that duvet jacket because of the size and in really cold environments that it's designed for. That works really well.

Even if I'm not wearing them, I always take mittens even if it's warm to start off in the day in that winter environment I take mittens. When I say warm, it's not cold enough to wear mittens is what I mean. So always have your mittens with you. I also take some spare liners for my glove, so if I'm working with my hands and my liner has got a bit damp and then I stop and my hands are maybe a little bit cold, I can swap them out. I can put the damp liners, I can stuff them in pocket, so that the body warmth starts to drive them out. I can put the dry liners back inside my glove shell and continue with nice warm hands and I don't even need to use my mittens and I've still got my mittens for backup.

What else do I take? Well, I have an axe and a snow shovel, and I'll talk a bit more about that shortly. I also take a head torch and spare batteries. Always wise to have on a day hike or particularly in a winter environment where it gets dark early, you can operate still potentially in dark conditions where you couldn't otherwise. I typically take a flask of hot water if not a hot drink just so that I can keep hydrated. Remember it's important to stay well-hydrated in cold conditions, it helps your circulation work properly, it helps you to function properly and for the blood to get around your system and into your extremities, it helps you keep your hands warm and your warm you're less likely to get cold injuries.

I also take them some chocolate for some sugar and for some fat. So I get some quite quick energy and also some more sustaining energy and I also would typically take something that's gonna be a bit more slow-release but it also help keep me warm. So Jerky is good. If you to look at people in the north they typically ate quite a lot of meat and it does have a thermal benefit to digesting those heavy proteins. You don't get so much energy from high protein, low fat foods, but you do get warmth from breaking down the proteins, which is why they're good to have in your system as well. So those are things that I would typically have with me.

You might also consider adding a pair of duvet trousers, as well as the duvet jackets. So you've almost got sort of a sleepwalking sleeping bag and potentially

you might also consider adding a top that can be used for various winter shelters or a buffy bag that you can sit inside particular if there are several of you that can be a good thing to take with you or even a blizzard bag if you're on your own. Those are closed cell reflective sleeping bags that are emergency sleeping bags. They are very good as well.

These days you've also got other options in terms of emergencies as well as such as packing a spot device, you can put a GPS with you as well if you want to. I always got a map and compass anyway but those are the sorts of things you should have with you. Some means of staying warm, means of having a drink, and some basic foods at least.

Now if you get lost or otherwise caught out in the forest there are multiple shelters that you could consider and I've mentioned that you could use a top or a buffy bag or even a blizzard bag in combination with those. But even without that there are lots of different options. My first choice though would be just to build a big fire, a big enough fire will help keep you warm through even the coldest of nights.

Of course, you need the ability to light the fire and that's why I carry matches and a fire steel on my person all the time and I wouldn't be looking at friction fire-lighting in that environment. You need to be extremely good at it and the materials available in the winter environment are few and far between. In the north of Sweden you've got three or four species of trees readily available and several of them are not particularly good for friction fire-lighting.

So if you're thinking about emergency fire-lighting in the winter, you should be carrying matches and you should be carrying fire flashes or some sort of sparking device. Those are your key things because there are plenty of natural materials that you can use with those. Lighting a fire with feather sticks is a viable option. You've got good pine that you can split and you can make feather sticks with. It's often very resinous, densely packed with resin sometimes, otherwise known as fatwood. That makes excellent splint, it makes excellent feather sticks. You can get a fire going in no time and it can easily be lit with both matches and sparks.

Birch bark is another option and the lichens that fest in the trees are another option still. So you've got multiple options of lighting with matches and sparks and they



should be on your person at all times. You also need to obtain plenty of fuel. Remember that's obvious.

But what's less obvious perhaps at least to some people is that you also need to get rid of as much snow as possible. What I mean by that is that if you consider lighting a fire on top of the snow, after a while it will melt the snow and then it will sink into the snow. And apart from the problems with moisture that in itself will cause, you don't get a lot of benefit from a fire that's buried in the snow. If you all stood on top of the snow and the fire is a foot or two below you and you're not going to get a lot of benefit from that in terms of radiant heat.

So what you need to do is dig down to the ground, you create a pit in the snow that is big enough for you and for the fire and then you light your fire down there. And that's where the axe and the shovel come into their own where you've got the axe to get access to the firewood that you need and you've got shovel to get access to the ground and the two together are a really powerful combination.

I would say that's probably the two most important pieces of survival equipment that you can carry in a winter forest environment, a snow shovel and an axe. If even if you don't have a knife or anything else, those two and some means of lighting a fire and you're pretty good then, you can chop a tree down, you can roll it into a pit, you can set fire to it and you lie next to it and stay warm until you can get to where you need to go to or somebody can find you.

When I go on these trips I do like to practice these types of skills. I've certainly got to practice skills before I need them and certainly good for you to practice skills before you need them as well. Training is always good. On previous trips my companions and I have refreshed our skills with building three long log fires as well as lean-to and again there are articles on my blog about that. On this trip it was the less well known two-log long log fire that we made and this is a traditional technique of the forest Sami people and when it was all set up, I settled down to really explain my thoughts and record how I was feeling.

[sound of burning log]

Paul: That sound is the sound of a special type of fire, a long-log fire, a special type of long-log fire even. I'm using two logs and you can hear the crinkling and

the crackling. Almost a little bit like charcoal burning in your barbecue and that's the sort of heat that I'm getting from this. So this is a really nice gentle heat that's warming me. It's well below zero where I am. I'm lying on the bed of a spruce, a bed of spruce bows.

I'm looking up and there is the new crescent moon up in the sky and I can see the stars as well. It's crystal-clear looking up through the pines and the rocket-like spires of the spruces, the Norway spruces and surrounded by a few silver birch as well. I look down to the ground and I put spruce down. As I say so, I'm down below the level of the snow, which keeps me out of the wind. I'm lying in front of a nice grill-like heat and I'm about two feet or about 60 centimeter away from the logs and that's keeping me really nice and warm.

Not too hot and not dangerously warm but really cozy whereas if I'm away from the fire, I can really feel the temperature starting to drop now and the sun went down quite some time ago, probably about an hour and half ago and it's getting properly dark now and I'm comfortable here in the woods and it's a fantastic skill to have.

You do need to have some skill and knowledge though and the critical tools you need really are an axe and a snow shovel. A snow shovel to clear the ground. You can't do this on top of the snow, so you need to clear the snow down to the ground, so you've got a solid surface to work on and you don't want to be lying on the snow. Any fires that you light that are more than just a quick fire to cook a sausage or something at lunchtime and you want to be lighting on top of the snow because they quickly melt down in to the snow. So you've got to be able to clear the snow.

Snow shovels are also very useful for making other types of shelters as well. You can dig down and make a snow grave, you can dig snow up to make a quinzee. It's a key survival tool really for the north that is massively underestimated by people. A really good shovel is important and I've got videos you can watch that include how to choose a snow shovel for the north.

The other key tool here is an axe as I say and that's so that you can chop the wood, and you can chop the dead stunning pine down, which is what I've used here and it's large diameter tree, it's nearly 12 inches in diameter at the base. It's good solid

sort of telegraph pole size pine tree, dead standing, dry, full of turpentine, burns really well and very good fuel in this environment.

And then of course you need to be able to limb the tree, take the branches off, snedding is the old English word for that and also then section it and if you don't have a large saw, you need to get to section it so that you have manageable sections. Sections that you can move but also that are long enough to take up the full length of your body. So that when you build this type of fire you get a heat along your whole body, you're warm from head to toe.

So these logs I've got here are about eight feet long and that they were pretty heavy and the heaviest of them, the largest one I could barely lift and I'm reasonably strong, but I dragged that into the pits. I just used a bit of power cord and the timber hitch around. I used the old skills of the foresters as they would have dragged logs out of the forest, dragged it over the snow, short distance into my pit.

The other I one I cut, I just lifted onto my shoulder and carried across and put there in as well and then top hewed off and so that you get a bit of a gap between the two, you light it with some birch bark and the wood chippings and then you get this established fire. A little bit like two logs are close to each other when you have a campfire. They're not quite touching but they're close enough together that they keep each other going and that's exactly what we've got. We've got a slow steady burn and this will last for hours and hours and hours and keep you warm through the night. So it's a fantastic skill to have.

So my final talk tip here really is that's the key skills are fire lighting and competency with an axe and the key pieces of survival equipment are an axe and a snow shovel and of course your fire lighting kit.

Towards the end of our trip, we met Per-Eric, largely by chance. He was due to be giving a presentation talk on Sami life at the lodge that we were staying at before catching our bus back to the airport. So it was that we joined the presentation and he was talking largely outside and it was quite a windy day and it was too windy for me to record but then we went inside a large kota, a teepee type structure where there was a fire established and Per-Eric then started to prepare some coffee for all of us in his kettle.

Per-Eric: I hope that everybody drinks coffee. I love the tea more.

Paul: Coffees seems to be important to the Sami for a long time.

Per-Eric: Yeah, it has been in the long. It was start just to have coffee. In the past time the birch, the pine wood was making bread of eating but the Sami people take the reindeer fat. You can put and make cakes with that to have energy bars.

Paul: From the pine.

Per-Eric: Yeah, pine wood. You take the pine wood then you get the flavor retained and you make into fat and get the fat and the energy from it.

Paul: Was it the inner bark or the bark, underneath the bark?

Per-Eric: There you can see taking place out in the nature in the pine wood forest you can see it. If the animals have to take the bark, its outer level, but you see if it's human, it starts always with a cut, then you can see it's human. Then they use it for and make it more with stones like anybody else does and they put into effect and make cakes of it. It wasn't an easy way to go out to be in the nature for a longer time.

Paul: [inaudible 00:49:35].

Per-Eric: But I used to have small piece of fat reindeer or bear fat with me. Bear fat is holy for me, it's a holy thing because I used to put it in on everything. When it is really cold, I take it like a lotion here. Because the cold not come in, but its [inaudible 0:50:10] so it's really useful and even for the leather. And then I cook it and then you get this kind of level in of the fat and then you take it and then you can . . .

Paul: You cook in the water?

Per-Eric: Yes, in water. Water is the first level and the second level is the fat. So that's the easy way too. And then I put some salt in it to conservate it. But bear fat is . . . if you have anything on the skin, it's super. You don't find any cream, you don't find anything which is so good, you can buy what do they call it, cortisol, it's nothing against bear fat. If you put some bear fat and you have a cut in three days it's gone. Because the bear eats about 60 to 80 kilo meat in a day and if you have

big stomach like this is really small more and it's like a hovercraft in there and all the best of it goes up in the fat. Everything which it's going to have in the winter time when its lying and sleeping is in the fat. Adrenaline, everything. All the hormones and if a bear fight another bear, if you don't be okay in three days, he dies. But he has so big cuts you can see them on some days. I don't know what the name is, but it's going to . . .

Paul: Healing

Per-Eric: Healing so fast, very quickly. And we use it then for . . . if I have something I can take some bear fat. Yes, take from trees around and put it.

Female: And you eat the meat of the bear?

Per-Eric: Yeah.

Female: It's thought to be good.

Per-Eric: Yeah, it's really good. But I'm really unique in that way and I am the only one in my area who eats bear meat that I find. I used to smoke it and dry it. It's really good meat.

Paul: It's quite rich isn't it, it's quite dark.

Per-Eric: And you if have a small piece of it and you don't get to starve the whole day. You eat it in the morning and you don't, "oh. is it really evening, you don't get starving.". There is lot of energy. Now do you want to have some coffee?

Paul: As Per-Eric splits some more firewood with his axe, he also began to explain a little more about the yoik.

Per-Eric: It's a kind of music. Yoik is almost for the moment. It not that you're going to the studio and make for me. It's a . . . The studio is coming in that time. You sit there with people around you and or something, but you can't be alone, it's no problem but if you have . . . everybody has fallen in love some time, and that when you fall in love, it's all in the testosterone, which is useful. So it's making great differences with your body and with your thinking.

So the yoik can be about . . . I am not so modern at that I yoik about often. Now in these days I think it's really okay but for me and that I have to respect for myself is

a woman, which is interesting for me and that is for every human being who wants it his way only. So that's really important.

So a yoik can be in another way if you're sad. And if you have lost somebody, somebody in the family has died or somebody who is really close to you, you have missed in some way and even if I have to kill my dog it's the same thing and that may sounds like this more.

[Sami yoik song]

Per-Eric: It sounds like that. And then sometimes it can be happy in some way and happy . . . I want to be happy all the time but it's been crazy with the human. I have to be sad some time but I want to be happy more than I am sad and may people is thinking is, oh that's not possible. Make a try than you find out it's possible. It's making your thinking more happy than you think you are. That's something. I do it. Even if you have to bonk your head in the stove, you have to try it. Then you know and then in the positive you learn something every time when you do something. That's really for me it's always wonderful to do that.

You learn every day even when I am quite . . . I am an old man now if you look at my age but I am not an old man in here. Everybody gets old. Now I am 65, I have to take a wheel chair to come out to the city. That, oh, I am 65 years old, oh, I am 70 years, now I am soon to die. I don't know that thinking. You are young, so that is in your brain and that's not young or anything. In that time then you look old, I will have my birthday, you make your birthday do something, oh shit, there I am old and there I am going to die and I am dead. [sobbing sound] Crying every day is here you need to be to beat the clock. In a certain positive way to be [inaudible 0:59:18]. Then you have to fight your own way.

Paul: After soup and bread, I continued to ask Per-Eric various questions and one of the interesting discussions we had was the use of salts in addition to the importance of coffee in Sami culture and then the conversation went from there. So you were saying coffee was important? I have seen a little salt as well. Is salt very important? Is it something to trifle?

Per-Eric: Salt in the coffee is . . . that's why in the winter when it's snow you don't find seeking for water, you take snow . . .

Paul: Yes.

Per-Eric: . . . and cook it and then you have no minerals.

Paul: Yes.

Per-Eric: Then you put some salt in it that's why. Otherwise you get some dry lips and every kind of . . . it's not . . . yeah, you feel it. But the salt is sometimes if you don't have dry reindeer meat or dry reindeer fat with you then you put that.

Paul: As a preservative.

Per-Eric: That you get energy in from the salt. So I think in everything have a practical meaning. You don't do in things for, "Oh that I am going to do". You do it because there is some reason that you do it. That's why we put some salt in the coffee, we don't have reindeer meat, dry reindeer meat. We used to put always that in the coffee. But I have tried it on groups and tourists, they don't like it. They want vodka.

Paul: Were there plants or trees in discussion? The Sami, the coffee and salt and reindeer. Was there a special plant.

Per-Eric: Yeah, we have the special plant we make some tea and nowadays you have that . . . which you call chaga. It's in the birch tree, the black tea. They find it out that it's good to cancer and everything now. But the Sami have used it for a long time and that's why coffee was sold okay when it came into the Sami culture. You have drinking plants and or chaga that kind of before us.

Paul: It's interesting how widespread you that usage. I some have friends in Canada who [inaudible 1:02:53] exactly the same way to make tea. So the same use but it's a long way apart.

Per-Eric: Yeah, it's a long way. But the nature of people, they find out which things is good and which you can use they will use for. You don't even know why they will you guess but you find out. You drink it, you wait five minutes, Oh, hey now it's nice and the next five I think it's a big problem with the native people without and even sugar because the native people always when you had food and he's quiet, I used to . . . when I am hunting, it's three days bad weather. You can't see anything. Then I lie in the kota and we're eating and eating and eating and eating.

Paul: All the time?

Per-Eric: Yes, just lie down and eat and make so much energy and it's an instinct. I don't know but always when we have possibility we eat and that is why I think the native people is doing the same piece the same with . . . you have the food and nowadays we have a lot of sugar and glucose called carbohydrates in it and you're and eating and eating and that's not good for the body.

Paul: So it's so to get the energy.

Per-Eric: And it's the same with alcohol, you can drink and drink and drink and that's you know what happened you get in alcohol. It's good to do that but it's even negative if I say so. If you can't handle it, if you don't leave that kind of life. So I see in my neighborhood and it's a big problem. we don't . . . it's like debit and credit. If you eat some way have to in some way you have to take it away this is plus and minus.

Paul: It's a balance of all things.

Per-Eric: Yeah, it makes the balance But if I have the key to that I would be really famous but nobody has it. But I am going to take a little yoik to you about this moment, feelings, you are like the flower of many kinds. You have many kinds of plants in you.

[Sami yoik song]

Audience: [applause]

Per-Eric: [Sami language] In the Sami language you say [Sami language], It's thank you. [Sami language].

Some people is making yoga, but were sitting all the day like this. I don't know the difference. But it was nice time to spend the time today with you. I hope you have enjoyed this small moment in our lives. It's a moment to have you. And I am really thankful that I could meet you and be here a small time together. Thank you.

Paul: Well, thank you again to Per-Eric for that opportunity to gain further insight into Sami culture and his perspective on life, which was very interesting in itself. I



hope you enjoyed listening to him, I hope you enjoyed the yoik and I hope you also enjoyed the rest of the podcast.

It's been a little bit of a different format to the interview format that I have had in the last few podcasts. I hope you enjoyed that variety. If so please let me know and you can tweet me @pkirt, that's P-K-I-R-T or you can leave me a message or comment underneath the podcast on my blog @PaulCurley.co.uk, there you'll find this podcast embedded within a blog post, along with information and links to all of the things that we talked about within the podcast, links to different articles and there underneath you can leave a comment too.

And if I could ask one last favor of you, if you're listening to this on iTunes please could you leave me a rating on iTunes, a honest rating and a honest review that would be absolutely appreciated. It really does help raise the visibility of a podcast so that other people who are interested in this type of content can also find it and enjoy it and the same goes if you are listening on the Stitcher, please if you could leave a quick review or rating there that I would help massively, too.

So thank you for listening to this podcast. I will be back again in a few weeks' time and I'll be joined by Professor Jules Pretty, author of the book *The Edge Of Extinction*, *Travels with Enduring People and Vanishing Lands* and that promises to be a fascinating conversation. So join me again on podcast seven. Thanks.