

Trekking with Ötzi's

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Phoebe: Hello and welcome to the EXARC Show. My name is Phoebe Baker, and today I'm joined by Markus Klek, a member of our EXARC community, to talk about his recent Alpine Stone Age trek. We have been joined by Markus before on a previous episode on the EXARC Show, so it is a real delight to have him back to catch up on his recent work. For those unfamiliar with Markus' work, he is an independent researcher focusing on reconstructing and engaging with the material culture of prehistory. As part of this, he has run his business Paläotechnik since 1996. Paläotechnik offers expertise in reconstructing Paleolithic life and material culture, with services ranging from creating replicas to offering living history experiences. As part of this, Markus has run several expeditions inspired by Paleolithic life, aiming to explore and test how prehistoric people lived and moved in the past. So again, welcome Markus, thank you for being here. It's a real, real pleasure.

Markus: Thanks for having me on again, Phoebe.

Phoebe: I'm really excited to hear more about your recent expedition through the Alps. So to start off, would you like to give us a brief rundown of the expedition?

Markus: Yes. This was actually a two part event. We tried the first time to reach the place where the Iceman was found in the Ötztal Alps last year. And we didn't quite make it, because of bad weather. So we started a second attempt this October which was successful. The basic idea was to retrace the Iceman's ascent of the Alps to the place where he was found dead in 1991, starting in the Vintschgau, the valley where he most likely lived or started from. And then retrace his steps to the final location, high up in the Alps. All this, of course, in Stone Age gear.

Phoebe: Yes, which is really, really cool. So your route is based on Ötzi's trek, how based was your gear that you were taking, was that specifically modeled on what Ötzi was wearing or were you more broad?

Markus: It was more broad. We were four people, and two of them kind of replicated Ötzi's outfit. So we had two Ötzi's - or two Icemen - we call him Ötzi in Germany because he was found in the Ötztal Alps. In English he's more known as the Iceman. So two of the participants replicated a lot of the parts of Ötzi's equipment. They went in replicated Neolithic gear and me and the fourth guy, we only had a few items replicated from Ötzi's equipment and we were more with Paleolithic or Mesolithic equipment. So we kind of spanned the whole range of homo sapiens prehistory pretty much.

Phoebe: That's really cool. Could you notice any differences in the technology, like how it works in the field, if you had such a big, broad range?

Markus: That's kind of hard to say because if you look at it from the outside, it's pretty much all leather and fur. One of the participants wore like a linen tunic. Other than that, if you would've looked at us from the outside, you would probably not see a big difference, with regards to the equipment. Maybe the shoes are the most obvious, because Ötzi has these really refined or very intricate, complex type of shoe that he wore. The Paleolithic or the Mesolithic versions, they were more simple, but nevertheless worked just as well. In some cases even worked better because of... then we are already kind of getting into it... the whole thing about the shoes, because we also walk barefoot. And of course, complex shoes tend to... due to their complexity, you can run into all sorts of problems with the materials because it's fit together from different parts. So things can break. You need to fix them. The most simple shoe is just a wraparound piece of leather around your foot. It's only one part. One of the participants wore a piece like this and it worked very well.

Phoebe: This is really interesting. I saw that you mentioned this on some of the online writing you've done about the expedition, and I was really hoping to ask about being barefoot and the shoes.

Markus: That was one of the main surprises of the first attempt, in 2024, where I decided to start out barefoot. And then while walking, I realized, well, I don't need the shoes yet, I still don't need the shoes. After two days, I still didn't need the shoes. So in the end I said, well, let's go as far as possible without any shoes. And I did the whole expedition without shoes. We went over very, very rugged terrain also. And I'm not trained to walk barefoot a lot. If you were trained to walk barefoot, you could probably cover all sorts of different terrain. But I did just fine, first of all, my shoes didn't cause me any problems with regards to blisters or anything like that, because I didn't wear them and my shoes didn't wear out, also because I didn't wear them. Of course, then it's logical to conclude that you say, okay, it makes sense to walk barefoot as long as possible with regards to temperature and terrain and only when it's necessary, that's when you put on shoes. On the second expedition, we all started out barefoot because we knew, well, it's possible to do this. But after one day, when we got into really the high Alps and we had to do some serious climbing, we all decided to put shoes back on. And for the next three days, we basically did not take them off anymore. This was more due to it being really cold on the feet. We had to walk over snow a lot. But you could walk without shoes for a long time. You save yourself the trouble of getting blisters and also of wearing out your shoes along the way.

Phoebe: That makes a lot of sense. I find shoes really interesting as we've discussed on our previous episode. So it was more kind of the cold temperatures that resulted in needing shoes rather than terrain?

Markus: The terrain also because we really had to do some serious climbing and I didn't have that experience yet with the Alpine trip. With your feet, you have a lot more grip because all the leather shoes, there's no tread, so they're all flat at the bottom. Ötzi had an extra piece of leather across the bottom of the sole, to give it some extra traction. But of course, that's not a whole lot. So in general, if you walk on a surface that tends to be slippery and you want to have a safe grip, you're probably better off barefoot than with any sort of leather shoe. On the other hand, if the terrain is really rough, if it's really stony or spiky, then of course you would need the shoes. We always were discussing, ah should we put the shoes back on now? Now it's climbing, we're climbing on rocks. What's more important? Is it more the grip or is it that we don't hurt our feet? So this was a very interesting discussion and very important decisions to make, especially in the Alps when you're climbing. It's also about safety and then it's probably good if you have experience. If you do these trips a lot more, then you would know, okay, now this is the time when it's necessary to put shoes on and now it's probably safer to keep them off to have a better grip on the rocks.

Phoebe: Really interesting things to be weighing up. Did you find the shoes were your only piece of surprising equipment?

Markus: Ötzi had this axe with him, this copper axe. And my colleagues, the two that were replicating the Iceman, or at least one of them, also had a copper axe. Already down at the car we were discussing, ah, should he take it or not? It's kind of heavy and we all know by now from these expeditions that these sort of axes, a prehistoric axe, is not a tool that you really need on these sort of expeditions. It's a very specific tool that Ötzi used to work on his bow stave. But if you don't have any wood work like this to do, an axe is nothing you would carry. I gave up carrying axes very early on because I realized they don't do any good. So that's another thing that we realized, it's kind of a classic, you go camping, you go somewhere, you take an axe. It's just our mindset that this is an important tool. But I came to the conclusion that it's not really something I want to carry. I carry very limited amounts of extra tools and gear. Also, we didn't carry any water containers because this is not necessary. In the Alps, you don't need to carry water, because water is everywhere. So that's another thing that you just don't do. And then we all carried the Ötzi-style, bent stick type of backpack. These generally work very well. In the first and also in the second expedition, one of the participants had some issues with the backpack, so we had to fix it. We had to work on the backpack. As this was the second expedition and we had a good chance to test things out in the first one, people changed some pieces in their equipment, but not a whole lot. I basically took the same equipment as I did last time. Very limited to a weight of about 11 kilo. I had the lightest pack. The other guys took a lot more things, a lot more clothing also for the night. And I was lucky enough that the nights were fine for me. Other than this, I would say, the equipment that we used worked very well for the purpose.

Phoebe: Very interesting. That brings me nicely actually to another question. I wanna talk about the nights. Were you sleeping in shelters? Were you sleeping out in the open? Did you have to use fire? How did you cope with the cold and did this change as you went up in altitude?

Markus: Well, the thing is, the Alps is of course not Sweden or Scandinavia. You're not allowed to sleep outside. In central Europe, you're not allowed to do anything, basically. You're not allowed to start fires in areas. You're not allowed to sleep outside in the woods. This is something that you have to deal with, especially as we wanted to stay at certain archaeological sites, to stay overnight there. So this was all kind of panning out to be a little different. To make a long story short, we slept in shelters during most of the nights and just spent, basically, two nights outside. And the nights outside, of course, the higher you go in the Alps and you can feel this, the colder it gets. The first expedition, we were only in the lower parts of the Alps because we didn't make it all the way up. So the nights were fine, uncomfortable, as they always are if you take limited equipment. Also something that I think is very important to keep in mind, that we go into these expeditions as modern-day Europeans, with what we expect to be a good night. Of course we know that it will not be like that, but we tend to take more equipment than indigenous or prehistoric people would've taken just because we're not used to the conditions, so we want to be comfortable. The others brought gloves, they brought hats, they brought extra pants and all these sorts of things. And I said, well, either I'll be really miserable at night, which I usually am anyways, but I don't want to carry all this extra equipment because for me it's not authentic. Plus it's also too heavy. I don't want to bother with this load. So the nights outside, generally, I notice from other expeditions, and that's also how it is for the participants, you don't sleep very well. That's just how it is. It's below freezing up there, the water freezes, everything freezes. We did not take anything against the rain. That's also something of a luxury of modern times that we can look at the weather forecast and then see, aha, for the next four days it will not rain. We also thought about taking leather tarps for making a tent. Each carries one piece of leather and in the evening if the weather gets bad, we make this into some sort of shelter. But as we saw it would not be raining most likely we left these skins at home, which would have been extra weight to carry.

Phoebe: Yeah, that makes sense. I can imagine leather of that size being quite heavy. And was there a reason that you chose October as the month for your expedition? Why not choose a warmer month?

Markus: Why not choose a warmer month? Exactly. Well, one of the participants, Philip, he's from the area and he's actually also a mountaineering guide. He initiated this whole expedition. He knows the area very well. I guess without him, I would not have undertaken something like this because I'm not really familiar with the Alps. The weather is really nice there in October, it's still fairly warm. And if you're lucky the sun is shining

all the time. And that's what was the case on the second expedition. Then it's also a question of the holidays. You know, I'm self-employed and go on vacation and do things whenever I want. But the other guys are not, they have regular jobs. They do this thing as a hobby, like a serious hobby, of course. We had to stick with the vacation, so October was the best choice to do this. Later would be impossible. Then the snow falls and before we couldn't find a date.

Phoebe: Fair enough. I also wanted to ask, you've mentioned your friend who is a mountaineering guide. What was the kind of level of experience... I know that you've done some expeditions in Stone Age clothing before, had other people and what are people's general ability with mountain climbing before this?

Markus: Philip has experience with this mountaineering, of course, mostly in modern gear. I don't think he does any extended multi-day expeditions like this. Only the two times that we went together. I think he goes on day-treks. The other two guys don't have mountaineering experience. I think Dennis was in the area before, twenty years ago, with modern equipment, of course. They're all very crafty in creating gear, but they don't have a lot of experience in extended mountaineering, nor do I. In the Alps, I don't have that much experience.

Phoebe: But you have some experience in Stone Age expeditions prior to this?

Markus: Yes, definitely. I've done various expeditions by now and also stayed in base camps on these Stone Age immersions where you don't go hiking, but you are in a camp for extended periods of time. So I do have that experience and I think it comes in very handy when it comes to choosing gear. And being aware of what is really needed in a situation like this. And that's, I guess, why I always so far got away with the least weight on my back. But we were lucky, you know, it could have been different. It could have rained, it could have been super cold, and then the others would've said, ha ha, here we go. We have our extra fur coat, and you don't, you know?

Phoebe: A slightly different subject... I wanna talk about food. Did you bring any with you? Did you forage it all on the way? And did you want this to be based in Stone Age reality?

Markus: Yes, of course. The food is also very important. We take food that could have existed in prehistory also. Generally with these expeditions, as you can't expect to collect a whole lot of food along the way, we all brought prepared food. In the lower elevations, after the first trek, I realized, well, I could have gone without food at all. You will be kind of miserable just eating whatever there is, but it would've been fine because there's a lot of chestnuts, these edible chestnuts. So that's basically all you need. For three or four days, you would be fine with chestnuts, some mushrooms and berries. That would've been totally fine. On the second trip, it's very different because you go very high up, above the tree line, and there's not much growing there anymore. We picked some

berries along the way, but that's pretty much it. And we were looking out for some dead animals because there's always dead animals that fall. I don't know how you call them, *Fallwild*. That's the shammies or ibex. When they fall off the rocks, you can find them, but we only found bones without meat on them. Of course in an expedition like this, you do need to take some food and we did. Like with the rest of the equipment, I notice already people take too much. You always take too much of everything. You take too much clothing, too many tools that you don't need, and you also take too much food. That seems to be a general rule. But you have to carry it and it's not realistic. It's just from our fear that we don't get enough. That's the modern mindset.

Phoebe: Do you think the amount of food that was available to you in your surroundings is likely to be in any way similar to what Ötzi would've had? Do you know much about the change in environment between early Holocene and now, in the Alps?

Markus: Of course there have been changes. The climate is very important. The climate basically dictates everything else, the flora, the vegetation. And the vegetation kind of dictates what animals are there. I'm not really sure. I know that the environment was different. There have also been people up there in the Alps before Ötzi. We know this also, from the location where he was found, there were some flint tools from the Mesolithic. So as soon as the ice retreated people went into the Alps. One reason to go there was for hunting. Ötzi was equipped for hunting. His bow wasn't really functional yet. But that is something that we of course couldn't do. If we were able to be hunting in these sorts of areas, then that might have also been an incentive to take less food along. There is still animals, we've seen a lot of shammy up there. But of course we can't rely on hunting. And as soon as you get above the tree line - the area where Ötzi was, was definitely above the tree line, also back then - there is not much edible... there's not much food to be found.

Phoebe: So on your second expedition, you did get to Ötzi's location, didn't you?

Markus: Yes, we got all the way up there. By now there is a trail that leads to an area close by, not to the exact location. And there's also an emergency hut up there, like a house that they built. I think you can even eat there or something, it's kind of bizarre. But of course we did not take that trail, it's really just a dinky little nasty trail. You don't even see it. I expected it to be a lot bigger. But our mountaineering guide Philip said, no, no, we'll take the most direct route and there is actually then no trail at all. And that's when I realized then, aha, okay, that's why we didn't go up there the first time. When he said there was snow, I thought, oh, well I got snowshoes, I got replicated snowshoes from the Neolithic. But when we climbed up there, I'm like, okay, now I know why we didn't do that. This was some really serious and, I thought, dangerous climbing. I was pretty exhausted. The others were exhausted too. But we made it up there. It's really fascinating after all this climbing, going up there and getting the view and seeing in what sort of environment you are up there. It's not like on the moon, but it's inhospitable, just

like on the moon. The location where Ötzi was found, it's not really exciting. It looks like anything else. They have marked the areas where parts of his equipment were found with red paint. There's just a red dot. Okay, this is probably where the quiver was found. This is where the axe was found. But that's about it. And of course there's a camera up there. It's like a live camera from the University of Innsbruck. But yeah, for us it was exciting. Everybody knows about Ötzi, everybody who's interested in prehistory knows about the Iceman, knows the ins and outs of the equipment. And then to be finally climbing up there with this prehistoric gear, and after the second attempt finally reaching this area, it did feel special. Like we hiked up on the Mount Everest, I guess. Especially if you think that this person has really been lying up there in the ice for 5,300 years. That's a crazy thought. If you think that people have been hiking up there over the millennia and nobody ever saw him, he's been there, they walked over him, they passed by him, it's pretty intense to be up there, finally.

Phoebe: How amazing. It makes you wonder what else is up there that we are walking over...

Markus: Yes, the immediate area, they went through it like crazy, they were looking, is there more stuff? Is there more parts? So they went up there again and again and again. They didn't find much more, but they found evidence that people were there in the Neolithic before Ötzi and even during the Mesolithic. So, also exciting to see that he wasn't the first up there, but this was an area where people crossed the Alps back and forth, thousands of years before Ötzi. Close by, there's the so-called Gurglerjoch. This is another mountain pass that people hiked on. There's a lot of areas in the Alps that were used in prehistory. To me, this was kind of new, I thought, okay, Ötzi is one of them. I knew about a few others, but then, it seemed like as soon as the ice retreated people followed the animals into the Alps and into these really rustic and intense landscapes.

Phoebe: You stopped at a range of different archaeological sites of Neolithic and Mesolithic age. Did any of those have the same feeling that the site of Ötzi did or was it the specialness of Ötzi overwhelmed the others?

Markus: I think the Ötzi location, the Iceman's location was the most special for us. It was also the highest, in terms of altitude. The others were all a little lower. One was very interesting. It's called the snail house, the *Schneckenhaus*. This is actually where we spent one of the nights because it's sort of a stone circle. Nobody knows how old the stone circle is. It's probably not from the Mesolithic. It's from shepherds in the area that built these sort of very rustic shelters. This is where we spent the night. This also felt kind of special and wherever you are at these locations, in this - I keep repeating - this really intense environment, it does feel very special because people have been there over the millennia and now you are there in this like time capsule. You're dressed just like them. It does feel special to visit these archaeological sites. But definitely the location of the Iceman ranks the highest.

Phoebe: Do you think you'll be doing more treks like this in the future? Have you particularly enjoyed doing things at elevation?

Markus: Yes, I would love to repeat this. One expedition is always sort of before the next one, so I was already scouting around. This Gurglerjoch is very interesting, the Schnidejoch is another place in the Swiss Alps that has been used in the Neolithic. I'm definitely thinking about repeating something like this because I really like the landscape. It's very primeval, you can see how the glaciers shape the landscape. It's really rugged. It's really basic. It's a really cool environment in the centre of Europe, something like this, with all the rocks and just very, very limited vegetation... Otherwise you would have to go very far up north to get this kind of feeling. Yeah, I like the high alpine locations and if the others want to continue, I guess there might be another expedition next year.

Phoebe: That was gonna be my next question: do you think your companions would like to do it again as well?

Markus: I think so. Through social media, there's already people that are asking to join. So we would have to look into this if we want to open this to other people too, or if we just keep it as the 'well-established' group that we already have.

Phoebe: The images that you've got of the expedition just look incredible.

Markus: Yes, photos always look exciting. It's the same when I do these trips to Sweden. And this year I've said, okay, I will take some people to Sweden in the winter, which is also, of course, very intense. I got a lot of feedback of people saying, wow, this is great, and the images, and we want to join. I said, you know, this is not as fun as it looks, you really need to talk to people at length about what it means to do these things, especially with regards to the equipment, but also just the physical conditions. Images help, they look good, but often people get a wrong impression of what it takes to do this. You can't just go buy a piece of leather, sew up some sort of boot and say, hey, that's great, I'll come along. That probably wouldn't work very well.

Phoebe: I guess easy to convey the beauty, but less easy to convey the cold.

Markus: Yes, it is something that you need to prepare for a long time. You need a lot of experience to be able to make functional, prehistoric equipment from scratch. That's not something you can learn overnight.

Phoebe: How much help did your companions get from yourself? Or were they already well-equipped with all of their own Stone Age equipment?

Markus: They are very self-sufficient. They're all very crafty with what they're doing. They've all been doing this for many years. I can give some little here... but I also learn a lot from them. So it's a give and take, but they're all very experienced with making prehistoric gear.

Phoebe: I feel like I've learned a lot about the expedition. I'll ask two, smaller questions, which we kind of already covered both of them. The first one is, what is your favorite or most interesting part of the expedition, and the second one, what was the biggest difficulty that you encountered?

Markus: My favorite part about this expedition and these sort of expeditions in general is that I can do this only with things that I've made myself. This gives you a sense of freedom, that you're able to do things without having to rely on anybody or any sort of things that you need to buy in a store. You can just go out there and go into really intense and extreme environments, just like our ancestors did. We know these things worked back then, otherwise we would not be here. But we are now so far removed from this time period and also from this type of living, thinking that things are not possible if you don't have high tech equipment, you know, you need computers, everything has to be perfect. We have special things for every little purpose in our lives. For me, it's very exciting to realize that you can live with very simple equipment. That is one thing. It also gives you a sense of what it could have been in prehistory. Of course, it's not possible to recreate these realities, also with our modern mindset. I'm also very happy that, for example, for this expedition in the Alps, I just go to my large amount of equipment that I have at home. There's a lot of stuff there and I have everything there I need. I say, okay, I know I need this shirt, I need that shirt, I need the backpack, I need these boots, and I need to take one knife and one blade, and then some gear for fixing things. I need this and that much food. And off I go. I have these things ready. I know they work. I just get dressed like I would get dressed in modern equipment. I like also very much that these things that I use, these clothes, they feel very normal and very natural to me. I feel at home in them and I know how to fix them. I know every little part. I know what it's made of and I know how to maintain it and how it works, what it can do, and what it can't do. Takes a lot of time to get this feeling, but once you have it, I like that very much.

The difficulties... I would say it was definitely the high-altitude climbing. Especially going up to the Tisenjoch was really intense. I was scared, you know, I was scared! If I make one wrong step, I will fall off the mountain and that's it! We already had the vultures circling above us. This was really funny! Philip, who does a lot more mountain climbing, he was way up on top and he's like, hey look, we got the vultures above us! I'm like, oh great, they're just waiting for one of us to fall back. So this was definitely kind of scary. It was physically also challenging. Also I didn't realize that the air gets really thin up there. I thought this is something that happens at 4,000, 5,000 meters. But Philip said, oh no, it can start at 2,500-2,700 meters. I definitely felt this. And the others probably felt it too, your breathing gets really heavy. You're like [heavy breathing], but maybe it's also because I'm getting older...

Phoebe: So you did feel the air getting thinner?

Markus: I felt this because usually when I'm outside and walking with backpack and all this equipment, of course, you're breathing a lot and it's strenuous. That's why I asked him, is this possible? And he said, yeah, it's definitely an issue at these elevations.

Phoebe: Sounds kind of scary, some of that stuff, but rewarding.

Markus: Something that also comes to mind now is this idea of being up there and then thinking, okay, what the hell did Ötzi do up there? Why did they do this? The archaeologists tell us, they go up there for hunting. They go up there for herding animals. They go up there for trading, passing from one place to the other. But if you think of all the equipment that we already carried, and if you do trading and you carry rocks, if you carry flint from southern places in Italy, how much can you really carry? That's what we were all thinking about. It must have been really important to pass these mountain passes. Otherwise this is something you would not do. You don't do this if it's not absolutely necessary because you cannot carry much extra stuff in terms of trade goods. Something that we all thought, that we have all read about Ötzi and we know about the prehistory. Once you are up there, it really makes you wonder why they would've done it and not stayed in their lovely valleys where it's warm, the plants grow and the animals are abundant.

Phoebe: That was a really interesting point to end on, and it's been a really interesting discussion. As my final question before we wrap up, what are your plans for the future and how can the EXARC community help to make a difference in regards to the points that we discussed today?

Markus: Well, in February I'll be in Sweden with a small group. I have selected six people to join me there for a prehistoric winter camp and trek. So that's the next thing that is planned in terms of these expeditions. Anybody who's interested in testing prehistoric gear under everyday conditions - not just doing it in the laboratory or in your backyard - feel free to contact me. Give me ideas, give me input, give me feedback. That's what I can say to the EXARC community.

Phoebe: Perfect. That was an excellent answer. I've seen your advertisements for the Stone Age camp. It looks absolutely amazing and I wish you all the best. I hope it goes really, really well.

Markus: I sure hope so too... it should work out just fine. We'll be careful and not do stupid things.

Phoebe: They will be under expert guidance.

Markus: Yes. I have one guy from Finland joining, so I'm very happy about this.

Phoebe: Oh, fantastic. Well, that'd be familiar then. So further details about Markus' Stone Age winter camp will be on the bottom of this episode and also they are on our EXARC social media already. On that note, we will wrap up. Thank you very, very much

for joining us today. It's been absolutely fascinating to listen to. I'm quite jealous, really. I would love to do something like this.

Markus: Well, start working on the equipment, Phoebe!

Phoebe: I would love to - maybe this is in my future. I know I certainly learned a lot from this and I'm sure that our listeners did too. So thank you. Thank you to everyone else for listening to this episode of the EXARC Show. If you would like to become more involved with EXARC, why not become a member? Alternatively, you can make a small PayPal donation through the website to help support EXARC in its endeavors.

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