

Snow survival: A sleepless night in an icy shelter

Seconds away from civilization, 78 brave souls survive a night in the snow

By Nick Cruit

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Sandwiched between a pine bough roof and a couple 50-gallon trash bags to keep my sleeping bag off the snow, I desperately felt around the dark for my backpack and extra clothes to form some sort of pillow that would hopefully cradle my head through what I anticipated to be a difficult night.

With less than a hands-width of space separating my sleeping bag from the icy walls of the shelter I had toiled over for hours earlier that day, my back, which bore the brunt of the work, protested against the constricted space. Shifting positions was not an option for fear the fragile walls of snow would collapse and suffocate me in my sleep.

Though it was cold, the shelter's uncomfortably tight construction served its purpose in retaining the little heat my body produced. But as soon as the bivouac began to warm from my hot breath, providing a few fleeting moments of relaxation, the snow started to melt and drip onto my face.

I was stuck in a torture chamber built with my own two hands, counting the seconds until the sun rose to the time kept by each freezing drop of water that fell on my sleeping bag with a maddening plop.

Maybe it was the fact that this was my first overnight stay in the snow.

Maybe it was seeing the other students and instructors unfazed by what many considered a balmy 20-degree night — last year's overnight bivouac was subject to consistent 30-mph winds at 14 degrees below zero in Winter Park, Colo.

But while I tried to fight back the cold by imagining myself in the baking sun of a summer's day in my native Virginia, the fear of being completely out of my element seeped deeper into my thoughts.

The class

Every winter, snow surveyors find themselves deep in the backcountry conducting research on unfettered snow obtained in remote high-altitude meadows.

“Accurate snow sampling sometimes needs to be done in some pretty remote locations,” said Tony Tolsdorf, the Snow Survey and Survival School coordinator. “It is rare, but occasionally snow samplers get caught in the elements and have to hole in and wait for help. It's a possibility we must recognize and prepare for.”

And to prepare for the unexpected, these scientists, engineers and technicians employed in the water resources field convene for a week of instruction and training in snow sampling, avalanche recognition, outdoor survival and emergency care, hosted by the Natural Resources Conservation Service, an agency of the U.S. Department of Agriculture.

This year, the course was held at Granlibakken Resort in Tahoe City from Jan. 12 through 16.

And as they do every year, all students and instructors are required to build and spend the night in hand-made shelters to simulate being stranded for a night in a remote location.

The build

The day started with hauling old Christmas trees 100 yards up a slippery slope, hacking off their limbs and willing the slushy snow to form three, 3-foot-high walls roughly in the shape of a casket.

Despite finishing lunch before the build I'm already hungry after my shelter is complete. I sit back, wring the sweat and melted snow from my soggy boots, finish the last drops of my second liter-sized bottle of water and admire the work.

My pride was quickly shattered, however, when I looked up to see my neighbor putting the finishing touches on a palatial igloo-style ice cave.

Upon further inspection, I almost knocked the shelter down with jealousy when I walked over to see him standing up inside of his bivouac — which he had started constructing at the same time I did.

Woody Loftis, a snow surveyor from South Lake Tahoe, not only constructed his block shelter — a very basic igloo — in under an hour and a half, he had done it without breaking a sweat.

“My sleeves got a little wet carrying the blocks, but other than that I didn't break a sweat,” Loftis said. “I've done this a few times before for fun, so I have experience.”

With my head down and tail between my legs, I turned from Loftis' sturdy snow fortress and skulked back to my bivouac barely big enough to fit into, the whole time cursing his creation under my breath like Yosemite Sam swears at Bugs Bunny in cartoons.

But despite my utter disgust with the snow shanty that took far too long to build, I realized that if this were a real survival situation, Loftis' prior experience just saved him hours of trial-and-error construction and expended energy he would need for other tasks, like taking care of me after I wasted all my energy on building my meager shelter.

Surviving the night

As the sun sunk under the skyline and traded places with the moon, the students and instructors met back at the base of the hill after dinner for a few hours of comfort and warmth surrounding a bonfire that Brian Horner, the survival expert, had built on the embers of a fire-starting demonstration he conducted earlier that day.

And while the hot chocolate and s'mores Granlibakken had brought out for us seemed to distract the other students and instructors, the anticipation of actually having to spend the night in the gripping cold wore on me.

Up the now icy paths I had heaved the Christmas trees through earlier that day, I slipped and slid as I jogged to my bivouac, trying to build as much internal heat as I could before climbing into the sleeping bag.

But all the heat was lost as I carefully wriggled into the shelter, avoiding hitting the walls — every move slow and calculated like the game Operation. Only instead of being buzzed, I'd get a wall of snow in face if I made a hasty move.

Once in the sleeping bag, I cinched the hood tight around my face and began moving as much as my shelter would allow to “preheat” the bag. And while I could hear the snickers of several other students who were close enough to see me squirm, I was happy to abandon self-consciousness for a toasty sleeping bag.

So what if I looked ridiculous?

After about 15 minutes of wiggling around, the bag was finally warm enough to briefly take my mind off the fact that I was voluntarily sleeping in the snow less than a half-mile away from my cozy home in Tahoe City.

As I inventoried the items around me — a sleeping bag, a sleeping pad, two trash bags, warm clothes, a water bottle and a Cliff Bar — the only thing I could think of was how much worse this would be if this were a real survival situation and not a premeditated exercise.

Facing the facts

Based on his experience as a U.S. Military survival instructor and a big-mountain expedition climber, Horner explained when people find themselves in emergency situations in the wilderness, they are typically prepared for one of three situations: a day hike, a multi-night stay or a long expedition.

The question is, when the unexpected forces you into survival mode, how do you cope with what you have?

As Horner repeatedly explained throughout his lectures, the key to surviving in the wilderness is becoming extremely low maintenance and learning how to adapt — fast.

According to Horner, the limitations of the human body in survival mode break down into a “rule of threes.”

Generally speaking, the average human body can withstand three minutes without air, three hours without shelter if completely naked, three days without water and three weeks without food.

And though the human body seems incredibly resilient by these standards, the longer you go without satisfying these basic needs, the less efficient you become, Horner said.

But no matter what kind of challenges are thrown your way in a survival situation, Horner said a little bit of education, combined with a knowledge of what you’re physically capable of, will allow you to take that deep breath, recognize the moment and make the right decisions.

“Find out what your basic capabilities are, like how well you can swim or how long you can hold your breath, and know them before you get thrown into a difficult situation,” Horner said. “Education does make the difference in survival moments because the decision-making process is harder than you think. And if you’re looking at what makes people survivors, it’s their ability to make decisions.”

But while all the classes, planning and preparation in the world will better equip you for a survival situation, Horner was adamant about reminding the class that “nothing beats experience.”

A useful experience

Before the sun had a chance rise and thaw the parts of my sleeping bag crusted with the frozen drippings of my shelter, I was tapped on the shoulder by one of the instructors to wake up.

It didn’t matter though; I wasn’t really asleep.

As I pushed myself out of the snow cave — now quite recklessly because I didn’t have to worry about spending another night inside its icy grip — I gathered my gear and began the slippery walk back to my car.

Sorely sleep deprived and stiff from exercise and cold, a smile still managed to creep across my face as I settled in behind the wheel.

Maybe more than the happiness of getting back to my warm apartment, a hot shower and a cup of coffee, the smile was a product of actually testing my own limits, and in doing so, gaining some useful experience and knowledge about myself.

Maybe after one night I wasn’t on par with the other students who build snow caves for fun and have logged countless hours in the snow, and maybe I won’t leave my warm

office job to join the rest of the snow surveyors on their remote mountain test sites. But for all the freezing fingers, the aching back and the lack of sleep, I'm confident that if I had to do it for real, I could survive another night in the snow.