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Accidents

*Analysis from the White Mountains of
New Hampshire and occasionally elsewhere*

I SPENT MUCH OF LAST WINTER'S CORE TUCKED INTO THE VALLEY THAT runs finally up against the headwall of the Cardigan–Firescrew upland in west-central New Hampshire. There, as was true a few miles to the north in the high White Mountains, the snow piled up. Even as occasional thaws melted back the depths, new snow kept arriving; the result was a thick and solid throwback snowpack that made an excellent base for wandering up and sliding down hills little and large.

One late-January day I strapped on snowshoes and bushwhacked oh-so-slowly up a local ridge through 16 inches of new snow in the beech and hemlock groves. Moose had already browsed the buds of their favored hobblebush twigs and moved on to the birch and maples. Wild turkeys were roosting in the trees and scouring tree wells for seed; they were peeved when I flushed them, and they winged their heavy bodies up to new perches. Their preferred bird-foot travel was simply impossible. The presence of tree wells at all marked this as a different winter. Out West, these are wells to be wary of. Every year, a few skiers tumble into them, get mired there and don't get out. In the East, we have spruce traps; tree wells here at their most lethal catch turkeys. Still, they speak of a different kind of winter. More than once, I heard winter 2018–2019 referred to as “old style.”

This opening series of skiing incidents clearly had their origins in new-style practices. To consider them and the rescue efforts they spawned, we will first follow their skiers off-piste (off the regular ski run).

Late Slide

On January 3, 2019, 20-year-old Demarco A. gathered his backcountry ski gear and set off at 10:30 A.M. up Carter–Moriah Trail from Gorham, New Hampshire. His goal was a nearly mile-long rock slide he'd spotted on the north side of Mount Moriah while trail running in the open season. That Demarco had been running near the top of the 4,000-footer says a lot

about his fitness and appetite for foot motion. As would be expected, he made good time on this 4.5-mile climb; that changed dramatically when he began his bushwhack down to the slide's top. Uneven terrain, thick cover, and deep snow made the going very slow, and, in later recounting his ordeal to New Hampshire Fish and Game conservation officers, Demarco estimated that he didn't reach the slide until nearly 4 P.M.

There, in the gathering dusk, he had a decision to make: Ski the slide, which drops about 1,300 vertical feet, and make his way out from its base, or retrace his steps and walk back down Carter–Moriah Trail. The ski descent of the slide won out. Before shoving off, Demarco called home, and, through a sketchy connection, relayed his decision and the fact that he was anxious about it. The connection then failed, although some further texts did get through, and they underlined Demarco's uncertainty. Demarco's call and texts set off a search that would run parallel to his efforts to work his way home that night.

Demarco's mother, Brandy, then called his father, Rodney, to say that she was worried about their son, and Rodney called Gorham police to report that Demarco might be lost or in trouble on Mount Moriah. Gorham police then alerted NHFG, and CO Matthew Holmes got in touch with Rodney. Meanwhile, Demarco had skied to the bottom of the slide, shifted from skiing to walking, and begun to hike north along the Pea Brook drainage.

While conferring with CO Holmes, Rodney said he would gear up and climb the Carter–Moriah Trail in search of his son, preferring this family-rescue plan to asking NHFG to search. CO Holmes agreed to this, and, as backup, he alerted two other COs and checked in with Lt. Mark Ober. Rodney promised he would stay in touch with Holmes. While this planning took place, Demarco's younger brother Eli set off up the trail, reaching the summit of Mount Surprise (roughly the halfway point) before turning back without making contact with his brother.

Rodney climbed into the night with a full pack, and, as he rose, he stopped periodically to call out to Demarco. (Demarco later said he heard some of those calls but couldn't locate their source.) Rodney also stayed in touch with Holmes via phone, and, as Rodney reached the summit area of Mount Moriah, he reported no contact with his son. But a little before 10 P.M., Rodney found his son's tracks and began to follow them. He alerted Holmes to this, and they agreed that Rodney would stay on the track toward town. Demarco, meanwhile, had climbed out of the Pea Brook drainage and,

from the ridge, sighted the lights of Gorham; he took aim toward them. This led him to a complex of logging roads with which he was familiar, and the roads led him to Route 2. He followed Route 2 into Gorham and reached home at around 10:30 P.M.

Holmes got a call about Demarco's return, called Rodney to confirm that he knew, and then drove to the house and interviewed Demarco. Near the interview's end, Rodney arrived back at the house. Holmes and COs Jim Cyr and Eric Fluette then cleared the call from the record and went home; it was well after midnight.

Comment: Every backcountry adventurer has a similar tale to tell from his or her early years. Part of the pleasure of being fit and having a body that responds nicely to demand lies in spontaneity: Oh, look! I think I'll go there. Most of these tales go untold, except at the dinner table or over a beer at a bar.

Phones, however, have changed some of that dynamic. Had Demarco not called from atop the slide, it's likely that his family would have waited into the night—anxiously—as we all tend to when someone is late. But one call led to the next, and then to the next. Calling is now so routine, a sort of up-to-the-minute reporting, that we rarely think of how our call may land. It also allows the caller a chance to voice anxiety, which is often a way of controlling said nerves. Once, for example, I've voiced concern over something I'm about to attempt, I've also envisioned doing it; that often calms me.

But the charge of anxiety can then land on the other end of the line. Consider Demarco's mother: There's her son, at the head of a wilderness, rock slide slope with dusk coming on. She knows he's fit and capable, but what if—and the possibilities multiply, fueled by his voiced anxiety. Demarco hangs up, looks downslope, and skis its nearly mile length and 1,300-foot drop, reaches the bottom, shifts to foot travel, and begins to walk out. Perhaps his mother imagines that scenario, but tens of others crowd it out, and they are chock-full of trouble. I need to do something, she thinks, and she calls Demarco's father. Each call leads to another.

Parallel stories set up through the evening hours: Demarco works his way north, toward Gorham and home. He has a light, he's fit, he's fine. But his family doesn't know that and sets out to do the work of finding him; they go south. NHFG's CO Holmes stays in touch, but he keeps his forces in reserve and lets the family work out this search. Were report of trouble to arrive, he has two COs ready to go, and he could summon more help, but he waits.

I like Holmes's decision and I like the family's work at self-sufficiency. It presents a rescue ideal of going out to get your own that plays forward in various iterations throughout the search and rescue community.

Before we leave this incident, a few thoughts about Demarco's decisions. A few are clear don'ts: 10:30 A.M. is too late to begin in January; going solo to an unskied, off-trail slide seems a risk-too-far. What's the skiing going to be like? What's the line of descent, left side or right? What's over the next hump? Too many questions. Your question: So, if he's anxious at the slide's top, why did he ski it?

I'm guessing that time and terrain made Demarco's decision for him. In the waning light, retracing his difficult way back up to the summit of Moriah and the trail must have been unappealing. The climb would have been around 700 vertical feet, and it would have taken Demarco through the thick, subalpine scrub that so many of us have rued tangling with. A long, dark slog, followed by an unexciting 4.5-mile walk out. The ski-descent, on the other hand, looked open, and, though he'd never been there, Demarco would have known that at roughly 2,000 feet the woods would be much taller and more open; walking down there would be easier. And downhill. And so, it was a go.

It's likely that, once down in the Pea Brook valley, Demarco didn't have cell reception, but after he climbed the ridge and sighted Gorham's lights, he probably did. A phone call then would have shortened the night's anxiety. Even as CO Holmes and his support officers assumed a waiting stance, they were still out beyond midnight resolving the call.

A Call from the Throat

A midday call on February 24 set in motion the rescue of an injured skier on Mount Lincoln in New Hampshire's Franconia Notch. Kellen B. had placed the call on behalf of his friend Patrick L., age 27. That morning the two friends had set out up Old Bridle Path, then dropped from it into the Walker Brook drainage. From there, they climbed up the brook valley and onto a slide that falls from the west flank of Mount Lincoln. Their intent was to get well up the slide and then ski down it.

The slide, often called Lincoln's Throat, has become popular with backcountry skiers and climbers, and, as its reputation has grown, Lincoln's Throat has begun to appear in accident reports. Clearly seen from the

ridge that carries Old Bridle Path, the slide is a lure to those who seek less-tracked terrain.

NHFG Lt. Jim Kneeland spent some time establishing a connection with the pair, but once he'd done so around 1:20 P.M. and heard their report, Kneeland summoned two COs and volunteers from Pemigewasset Valley Search and Rescue Team; PVSART's president, Alan Clark, had heard the initial call, and he had a team of rescuers and a SKED (a rescue litter that flexes and so snakes more easily through hard terrain) ready to go.

Kneeland also had advised Kellen and Patrick to try to descend slowly from the site of their initial call at 3,800 feet, where they were sheltering but also growing cold and wet. The weather reported at the Mount Washington Observatory that day featured 4.4 inches of snow with a water content of 0.8 inches, in other words heavy, wet snow of the sort that soaks through fabric and promotes hypothermia. The pair said they would work to get lower.

At 2:40 P.M. the first rescuers set out. By 4:20 P.M. initial rescuers had reached Patrick and Kellen about a tenth of a mile above the point where the south fork of Walker Brook diverges from the main stem. That meeting place points to the pair's success in moving from 3,800 feet and an exposed wait to the deeper valley and its protection, a section of self-rescue estimated at nearly a mile. Kneeland's report notes, "They splinted his leg to ski poles and then strapped a ski to the leg so that Patrick could slide down on his butt." Such an effort also shortened markedly the work of NHFG's and PVSART's rescuers, and they all emerged from the woods at 5:45 P.M.

Comment: Backcountry skiing—like its relations, climbing and bushwhacking—carries the added risk of isolation. Far fewer people are likely to be in Lincoln's Throat than in Tuckerman Ravine or along the Falling Waters Trail loop, and so such adventure asks for added self-sufficiency. Even as Patrick's injury impelled them to call for help, this pair of skiers also showed resilience after Kneeland's encouragement to try to get lower as they waited. By the time rescuers arrived, Kellen and Patrick had reduced substantially the distance rescue would require. Such a joint effort by the rescued and rescuers seems simply right.

Cataract Trouble

April 11 featured blue sky, moderate temperatures, light winds, and snow-chocked slopes on the east side of Mount Washington. It was, in short, the sort of Thursday on which a skier might look up and say, "Oh, to be free to

go today.” Nicholas B., age 32, was able to conjure that freedom, even as he could not find a companion to share it with, and he climbed up for a day of earned turns, arriving late morning in the scallop-shaped open terrain above Raymond Cataract. As this report’s source, the Mount Washington Avalanche Center, notes, Raymond Cataract is “an ephemeral, but recently popular ski descent only possible during winters with a deep snowpack.” Deep-snow 2019 offered just such a snowpack.

As Nicholas dropped in toward the cataract, a pair of hikers on Lion Head saw him and remarked on his solid, skillful turns; two skiers ascending Tuckerman Ravine Trail also saw a solo skier above before they returned to their uphill labors. Soon after these sightings, Nicholas skied over a convex bulge and triggered an avalanche. That avalanche, relatively modest at its crown (average depth, about 14 inches; width, 130 feet) carried him into a terrain trap where the narrowing drainage walls concentrated the snow, which buried him.

The Mount Washington Observatory webcam on Wildcat Mountain points toward these open eastern slopes, and it showed the avalanche falling between noon and 12:05 P.M.. At around 1:30 P.M. U.S. Forest Service snow ranger Frank Carus stopped to talk with a friend on Tuckerman Ravine Trail about a new avalanche crown the friend had seen. Given an avalanche forecast for possible human-triggered slides that day, Carus thought it prudent to check on this new avalanche. He gathered his gear and binoculars and climbed to a spot where he could scan the slide; that scan revealed a faint, single-skier track in the snow above the new crown. It was now 1:53 P.M. Carus had a potential emergency on his hands.

Carus called on nearby snow rangers Helon Hoffer and Jeff Fongemie, and the Appalachian Mountain Club’s Hermit Lake caretaker, Sarah Goodnow, to mobilize. Then, at 2:05 P.M., Carus skinned up the Lion Head Winter Route and broke off into the woods, aiming to intersect with the avalanche debris he imagined in the gully above. At 2:10 P.M. Carus reached the foot of the debris; no tracks led away from it.

Realizing someone could be buried in the debris and that he could not see the place where the avalanche had begun, Carus had a decision to make: wait for reinforcements or start searching now. The risk of immediately beginning lay in not knowing if more sliding snow might arrive from above and having no one to dig him out if it did. But significant time had passed already, and Carus decided to begin searching. He switched his avalanche beacon to receive and got a signal 80 feet away. The signal both simplified and

complicated the situation. Yes, someone was buried nearby and that needed immediate response. But the presence of the turned-on beacon made Carus wonder if Nicholas had been skiing with someone else, and so Carus worried another skier could be buried nearby.

Carus began probing, and he struck a soft resilience 47 inches down. He stepped a few feet downhill and began to dig. He first heard moaning from beneath the snow, kept digging, and reached a hand, then a helmet. Carus cleared snow from around Nicholas's face, tried to reassure the skier that help was here, and sought to learn if anyone else had been with Nicholas. Only eight minutes had passed since Carus's arrival.

Hoffer, acting as incident commander, made calls asking for advanced life support. At 2:30 P.M. a Life Flight helicopter left Lewiston, Maine, aiming for AMC's Pinkham Notch Visitor Center. Fongemie and Goodnow reached the site, bringing with them two volunteers they'd met on the way. Another beacon check reassured them that no other skier lay buried nearby. Nicholas had been buried in a seated, upright posture, with his feet at a depth of about six feet. The rescuers kept digging, slow work in the dense snow and ice, and as they uncovered Nicholas, he tried to stand and flailed his arms.

Nicholas tried to stand once again and then collapsed. The snow rangers noted shallow, erratic breathing, and as they checked, could not find a pulse. They began CPR at 2:34 P.M. Soon, Goodnow and the two volunteers returned from the Lion Head rescue cache with a litter, and the five rescuers strapped Nicholas into the litter and began a descent of the drainage, all the while continuing CPR. Once they had pulled the litter up from the streambed and into the forest, Fongemie rode in the litter and continued CPR. At the intersection with the trail, a snowcat met them for the 2-mile ride to Pinkham; they continued CPR throughout that ride. The cat arrived in the Pinkham parking lot at 3:30 P.M., where they were met by the Life Flight crew and a Gorham EMS ambulance crew. Sadly, the advanced life support applied to Nicholas could not revive him, and he was declared dead at 4 P.M.

Comment: I begin with the summary from the Mount Washington Avalanche Center's report:

Anyone with a bit of avalanche education may question the terrain selection that Nicholas made that day, but many more would admit to making similar choices in similar conditions. The fateful mistakes that Nicholas made were skiing alone and skiing above a terrain trap that carried significant consequence. The slope which released contained

a slab just barely large enough to bury a person; add a funnel and a narrow streambed to this and the avalanche debris became more than enough to bury Nicholas. Though surviving an avalanche on that day above that terrain trap is far from certain, having a partner skilled in companion rescue may have saved Nicholas in this case, assuming effective companion rescue occurred immediately after the avalanche. One other notable factor in this accident was the fact that at least three parties observed and later reported seeing what appeared to be a fresh crown line in Raymond Cataract. No one made the 5–10 minute diversion to look for clues or do a beacon search of the debris where a ski and pole were on the surface 75 feet uphill of the burial site.

As backcountry skiing, and more specifically steep skiing in avalanche terrain, continues to grow in popularity, we at MWAC continue to hope that people will get educated by taking avalanche courses as well as bring a partner and the appropriate skills and equipment into the terrain. For many of us, Nicholas's death gives us an opportunity to reflect on our own risky behaviors. Nicholas, like many of us in the ski community, loved to ski and had taken many of the steps necessary to stay safe while doing it. He had avalanche education under his belt, he carried a ski repair kit, extra layers, plenty of water, and a first-aid and survival kit. He was wearing a beacon and carrying a probe and shovel. Unfortunately, no one was watching from a safe location while he skied the slope, ready to rescue him before time ran out.

The MWAC forecast for the day pointed to “moderate” risk. That risk grew from an icy surface and 3 inches of recent new snow that had been shaped into windslabs by a northwest wind. Avalanches were “possible,” especially when given a human trigger. As the snow rangers point out in their analysis of this incident, “A Moderate avalanche danger rating is frequently considered manageable by educated backcountry skiers. . . . Due to these windslabs in our terrain, skiing a steep slope on a windslab is the norm all winter.”

Imagine yourself at the various decision points that drive this sad story forward. You are an advanced skier with Nicholas's training; it is a deep winter, providing expansive access; your usual companions can't join you; the day is achingly blue. What do you do?

I've often touted the MWAC's snow forecasting and analyses of incidents. For decades, if you would know snow, their snow rangers have been the people to see and listen to. Recently, MWAC's outreach has expanded in



USFS snow rangers Frank Carus and Jeff Fongemie investigate the crown of the avalanche that killed an experienced skier in April 2019 on the east side of Mount Washington. MOUNT WASHINGTON AVALANCHE CENTER

two particularly significant ways. First, instead of confining its forecasts to the east-facing ravines, MWAC now applies its forecasts to the whole range around Mount Washington. In doing so, MWAC emphasizes that avalanches are not confined to Tuckerman and Huntington Ravines; nor is the Gulf of Slides the only other place where snow slides. Most mountain people know this, but explicit inclusion broadens that awareness. Second, MWAC has also increased the frequency and detail of incident reporting and analysis. My summary is drawn largely from their reportage, and it is essential reading for those of us who would know the ways in which trouble happens and may be avoided in the White Mountains.

At the same time I'm writing this, I'm reading *Being Mortal: Medicine and What Matters in the End* (Picador, 2015), Atul Gawande's work about viewing and treating aging and mortality. This passage on page 140 considers autonomy and freedom:

The late, great philosopher Ronald Dworkin recognized that there is a second, more compelling sense of autonomy. Whatever the limits and travails we face, we want to retain the autonomy—the freedom—to be the authors of our lives. This is the very marrow of being human. As Dworkin wrote in his remarkable 1986 essay on the subject: “The value of autonomy . . . lies in the scheme of responsibility it creates: Autonomy makes each of us responsible for shaping his own life according to some coherent and distinctive sense of character, conviction, and interest. It allows each of us to lead our own lives rather than be led along them, so that each of us can be, to the extent such a scheme of rights can make this possible, what he has made himself.”

I see Nicholas, a skilled backcountry skier, dropping into the scallop-shaped slope of Raymond Cataract. Here he is on a best April day in an old-style, deep-snow winter. As noted by hikers atop Lion Head, his turns are strong, fluid. He will ski this line; he will leave his script of a track. Then, he skis over the bulge on a 39-degree slope, and the firm snow dissolves into motion; the world slides away, taking him with it. I never knew Nicholas, but I am sorry he is gone, even as I remain glad that he chose and wrote his line.

On Ice

On March 13, 2019, NHFG COs and an Androscoggin Valley Search and Rescue volunteer responded to a 6:15 P.M. call about a skier stranded in Burt Ravine on Mount Washington’s west side. The caller, a friend of Sean B., age 20, said that Sean had become stuck when he’d skied down into icy conditions in the ravine. Sean could not go up or down for fear of falling.

Rescuers used a snowmobile to ascend the Cog Railway to Jacob’s Ladder and then hiked to the edge of the ravine. Once there, a rescuer was able to descend to the stranded skier, secure him with a harness and rope, and then guide him up out of the ravine. That extrication was complete by 10:20 P.M., and rescuers and skiers reached the mountain’s base at 11 P.M.

Comment: NHFG’s official report is not yet available because this rescue is involved in ongoing litigation, but even the incident’s bare bones reported in public media raise eyebrows. Sean was reported to have no equipment with which he might have self-rescued.

Stilled, Waiting, Wondering

On December 14, 2018, NHFG Lt. Jim Kneeland was at the agency's dispatch office when a series of phone calls came in about a Facebook post. The post from Robert C., age 25, read as follows: "Send help, stuck by a cairn on old bridle in alpine between hut and Lafayette summit. Wind took map and compass in white out conditions." Robert had also sent a text to 911 asking for help; Kneeland tried calling back but got only voice mail. His text did get through, however, and Robert confirmed that he needed help. The time, unusual for a rescue call, was 10 A.M.

Kneeland called COs Glen Lucas and Kevin Bronson, and they set off up Old Bridle Path at 12:20 P.M. Kneeland also summoned a backup team of two more COs in case Robert proved hard to find. Later, Robert got a brief call through to 911, and that provided COs with his coordinates, which placed him just below the summit of Lafayette; the two COs reached him at 4:35 P.M. At 7 P.M. Robert and his rescuers reached the trailhead.

This straightforward rescue recommends itself for a revealing exchange of texts between Kneeland and Robert. Kneeland is identified by the initials JK, Robert by the initials RC. The exchange begins at 10:12 A.M., and, at outset, it is informational and tone-neutral:

JK: "Rob. Fish and game here. Do you need help"

RC: "Yes Old bridle path between hut and Lafayette At cairn can't find next one low visibility tried and failed repeatedly"

JK: "Ok we will be coming but it will take a while to get to you. Keep me posted"

The next exchange reported at 12:12 P.M. showed a shift in tone:

RC: "I think I'm just miserable not hypothermic. Snow got in through everything is wet. I'm scared."

JK: "Ok, Help is on the way."

RC: "Eta? Verge of falling asleep."

JK: "At least two hours. Is the wind getting worse"

RC: "It's been consistent."

JK: "Ok. How many cairns below the summit do you estimate you are"

RC: "Unknown. When I tried to find my way I went down and I went that far away from shrubs that seemed to be just above a cliff. I feel like I need to move"

JK: "If you move to get warm just don't get too far from cairn. Do you have any way to give me a coordinate of your location. How you doing Rob"

RC: "U reception bad. It hurt but now it's numb"

JK: "Iphone?"

RC: "I'm sleepy"

JK: "Move around a bit to get warm. Looks like the clouds are lifting some. Visibility any better?"

RC: "No"

JK: "Ok"

The next series of texts in midafternoon points to how waiting stretches out and gives way to raw fear.

RC: "Are they coming I'll die overnight."

JK: "They are coming. Just at hut. Coming your way. Have you tried calling 911 so I can get a coordinate of your location. I know you texted them but I can't get a coordinate from a text. Got a coordinate before the call dropped. I'm plotting you now."

RC: "Eta?"

JK: "They are about half mile away. Slow going."

JK: "About a quarter mile away."

RC: "Im scared"

JK: "They are one tenth away. Hang in there"

Comment: For context, let's look briefly at Robert's plan and the weather that trapped him. He set out at 2 A.M. with an eye toward climbing Lafayette and, if weather permitted, making his way along the Falling Waters loop. At 7 A.M. he reported seeing bad weather on the way, and he turned back to retreat from Lafayette down Greenleaf Trail. But the weather then stalled him, and he spent the hours before his 10 A.M. request for rescue trying to find his way.

The Mountain Washington Observatory reported an average temperature of 21 degrees Fahrenheit (11 above normal), with 1.3 inches of new snow and winds from the west averaging 43 MPH. Not weather to warm the soul but pretty routine for mid-December up high. Still, as Robert's dilemma makes clear, even minor storminess can stall an inexperienced winter hiker, especially above treeline, where finding the trail corridor asks for vision. Robert was carrying a map and compass that could have helped replace his weather-compromised vision, but when he took them out, the wind grabbed their plastic bag and blew it away. Retrieving (and keeping) items from a pack in even moderate wind takes practice.

The text messages show the raw feelings of a trapped hiker, and they highlight the now-inbred expectation of speed brought by high-tech compared with the step-by-step plod of a rescue in difficult conditions. Fear finds its way into the empty space between the call for help and rescuers' arrival. Add in the accelerated wind and whipping snow, both of which threaten and isolate. Everything seems fast except the creep of rescue and the seep of cold. The texts, in their clipped form, capture this, much in the way that well-wrought thought bubbles define cartoon characters. When you are stilled and must wait, the little theater of imagination begins to play disaster clips.

Weathered

Sometimes going a short distance can take a long time. That was true for Joshua K., age 36, who summoned rescue on Basin Cascades Trail, in Franconia Notch, on December 21, 2018. At 4 P.M., NHFG received a call from Joshua's fiancée, who said Joshua had called her to say he was marooned on the south side of Basin Cascade Trail because he could not cross Cascade Brook. Its waters were raging with recent rain and snowmelt, and Joshua was wet and cold and a half-mile short of his car in the Basin parking lot. He said he needed rescue.

NHFG's Lt. Mark Ober took charge of the incident, summoning two COs and asking AMC to make the Lonesome Lake Hut caretaker available for searching; Ober then drove to the Basin parking area, arriving at 5:50 P.M. The temperature was in the 40s, with intermittent heavy rain. COs Matt Holmes and Jim Cyrs arrived ten minutes later, and, by then, Ober also had Joshua's coordinates from a 911 call. Joshua was indeed about a half-mile up Basin Cascades Trail. Holmes and Cyrs headed up, and by 6:50 P.M. they were on the north side of the brook across from Joshua; they made eye contact but could not hear each other over the roar of the river. Nor could the COs find any crossing that looked remotely safe, and so they called Ober to suggest that he call in specialists. Ober's next calls went to Mountain Rescue Service and White Mountain Swiftwater Rescue Team.

By 10 P.M., five rescuers from MRS and six from WMSRT were at the parking lot, and they climbed quickly into the night. For nearly an hour, from 10:40 to 11:30 P.M., the rescuers searched for a place to attempt a crossing of the brook. Two WMSRT rescuers were able to cross successfully in their kayaks, carrying with them a rope they then used to set a highline traverse

above the water. By 12:30 A.M. rescuers from WMSRT and MRS had Joshua in a safety harness, and a little before 1 A.M., he and they were across the river. The group then hiked down to the parking area, where Ober interviewed Joshua and learned the fullness of his two-day story on Kinsman Pond and Cascade Brook Trails. By 2:15 A.M. rescuers had packed their gear, and everyone had cleared the parking area.

When he began his hike around noon on the 20th, Joshua aimed for Kinsman Pond Shelter, and he carried with him a full complement of overnight gear, but he did not have rain gear. The other missing item in Joshua's plan was a current, local weather forecast. The one he had from his home in southern New Hampshire called for showers moving in, and he later told Ober that he assumed southern rain would mean mountain snow.

On the night of the 20th, Joshua pulled up a half-mile short of Kinsman Pond Shelter and set up his tent for the night. Rain moved in overnight, and when he broke camp on the 21st, Joshua and his gear, including his sleeping bag, were wet; he then decided to abandon his plan to climb the Kinsmans and return to his car at the Basin. He made good progress until he reached the first crossing of Cascade Brook. There he found the brook more than living up to its name, and he thought trying to cross was unwise. Instead, he set out to bushwhack down the south side of the brook until he reached the final crossing. There, he hoped he'd find a way across.

The bushwhack was arduous, with heavy rain and sodden snow slowing him. By Joshua's estimate, it took him several hours to cover three-quarters of a mile, and during that wallow, he lost both snowshoes when he sank into the snow and the shoes got stuck there. When he reached the final brook crossing around 3:30 P.M., he could see no way across; at that point he called his fiancée and asked her to summon rescue.

Comment: As Lt. Ober pointed out in his incident report, the weather bears careful attention here. When Joshua set out on the 20th, he had a general forecast for 100 miles south of where he wanted to climb, and the day must have been encouraging. The Mount Washington Observatory recorded an average temperature of 30, light winds, and sunshine 92 percent of the time on the 20th. Its report for the 21st shows how variable our mountain weather can be: average temperature, 38; rainfall, 1.98 inches; average wind speed, 59. The observatory also reported a snowpack of 16 inches on the 20th had dwindled to 9 inches on the 21st, and only 2 inches on the 22nd. That adds up to a lot of water seeking equilibrium.

That Joshua failed to anticipate the coming waters set trouble in motion; that he could not keep himself dry in those waters shifted the incident from one of discomfort to possible emergency. Joshua said he called for help because he was afraid his feet would be too cold to continue on the 22nd. Also, it's clear his bushwhack had been very difficult, and he was now without snowshoes. All of that added up to calling rather than persisting in a bushwhack that stayed south of Cascade Brook. It's good Joshua did not try to force a river crossing, but it's also clear he was in weather and terrain that exceeded his capabilities by a good measure.

Slick Surface

Here briefly, although the incident took 24 hours to resolve, is a story about winter footwear. Early on December 8, 2018, Randy W., age 40, set out up Nineteen-Mile Brook Trail. He hiked from there to Carter Dome Trail and then on to South Carter before reversing direction and hiking back along the range to Carter Notch Hut. As he neared the hut on the way back, Randy was descending a steep stretch of hardpack snow when he slipped. His left snowshoe got hung up at an awkward angle, and he felt a sharp pain in his ankle. Randy righted himself (although he couldn't put weight on his ankle) and was butt-sliding down when a passerby arrived; that hiker went to the hut for help. Soon, AMC's caretaker and five volunteers arrived, and they helped Randy cover the roughly quarter-mile to the hut. There, the caretaker splinted Randy's ankle and called in the incident. AMC's huts director, James Wrigley, then called NHFG, and they began to plan for a rescue in the morning if, as seemed likely, Randy was unable to walk out.

Randy found no improvement in his ankle the next morning, only ongoing pain and immobility, and NHFG organized a skid and carryout. Fifteen rescuers arrived at the trailhead—eight volunteers and seven NHFG COs—and set out. At the hut, the caretaker and guests helped Randy hobble the few tenths of a mile up to the height-of-land, thereby saving the rescuers an uphill carry. A little before 10 A.M. the rescuers arrived, and Androscoggin Valley Search and Rescue emergency medical technician Mike Pelchat and CO Jim Cyrs assessed Randy and put an Aircast over his splint. Then they brought him out.

Comment: This rescue went as smoothly as could be hoped, even as it required a lot of people power. I return to Randy's slip and his footwear. Part of NHFG's routine when they oversee a rescue includes an inventory of

the rescued person's pack. The implicit question: Just how prepared was this person? The answer in Randy's case was well prepared. He had the right gear for his hike, including crampons. But when he slipped and broke his ankle, Randy was wearing his snowshoes—not crampons—on a steep descent of hardpacked snow.

Many of us who like winter wandering have been at just this place: near a hut or stopping place, end of a long day, and before us a slick but not overtly icy slope to descend. Do we stop and change from snowshoes to better traction—again? Or do we think, *I'll edge down, the claws on my shoes will give a bit of traction; I can butt-slide if I need to.* And so we go.

Snowshoes, especially those with the now-usual claws under the forefoot, are great for climbing. For descent of steep pitches? Not so great. Your weight tends to set back going downhill, and you land on the smooth, wide frame of a snowshoe instead of landing on the claw. If the snowshoe slips a bit, your weight goes back farther; it's easy to fall backward and start sliding. Once sliding, the snowshoes present a lot of surface to catch on a trailside tree or rock.

Most of us carry three options on long winter hikes where terrain will vary: snowshoes, Microspikes, and crampons. Shifting from one to the other and back can be wearying. I take this incident as reminder to self: Make the change, even if you are only a quarter-mile from the hut or the car.

Point of trail sensitivity: This endnote asks for thinking about footwear in another way. Much of my winter walking is on snowshoes; often I choose my trails to accommodate this preference. If I'm lucky, some fellow snowshoer has preceded me, set a track. Then the walking is a form of floating, albeit slow. But being preceded by narrower footing—Microspikes, boots—on mild slopes often means dealing with dented, postholed trails; the walking is then uneven, sometimes difficult, surely less enjoyable, especially after a freeze-thaw-freeze cycle. So, once we've cleared the slope that asked for narrow, spiky shoes, let's go back to the big ones. We all thank you.

Recommended Reading: Huntington Ice

I'm not equipped to analyze technical climbing accidents, but I draw valuable lessons from those who are. Many of those analysts are rescuers and guides in our mountains, and how they look at technical trouble is often instructive. I find that especially true on the Mount Washington Avalanche Center site, where an aforementioned, expanded, educational focus on winter incidents

makes for must-reading. If you would go in steep snow, you should go here: mountwashingtonavalanchecenter.org.

Briefly, here is synopsis of the February 10, 2019, incident described on the MWAC site and reported widely in the media. On that day, 37-year-old Jeremy U. left Pinkham Notch Visitor Center with the aim of climbing Huntington Ravine's Central Gully. An experienced rock climber, Jeremy was new to high-angle snow and ice climbing. He and a partner set out at 7:30 A.M. and split up at the junction of Lion Head Winter Route and Huntington Ravine Fire Road, with a plan to meet again at Pinkham at 4 P.M. When Jeremy didn't appear at 4 P.M., his partner alerted AMC, who in turn made further calls. The directed search that followed ended at 7:45 P.M. with the discovery of Jeremy's body in the boulder field called the Fan. Later analysis indicated that Jeremy had taken a sliding fall of some 300 feet from a slope pitched at 35 degrees.

In an article on the MWAC site, U.S. Forest Service lead snow ranger Frank Carus provides a detailed description of the scene, as well as meditation on likely causes and risks. Carus's thoughts spawned responses from a number of local mountain guides and climbers, and those responses were cast as leading to controversy in a long *Conway Sun* article on March 29 by Tom Eastman ("Unforgiving: Braving Mount Washington" at conwaydailysun.com). I read Carus's remarks carefully and find they didn't intend to invite controversy; rather, he is simply less judgmental than some of the figures quoted in the article. Reading both pieces and pondering their events and opinions can be excellent education for those of us who would go to steep slopes when the surfaces in those places dictate long slides if we fall.

PSAR Continued: Mapping Trouble

In our last issue, I wrote about the National Park Service's program known as PSAR, or Preventative Search and Rescue, and, in particular, about the USFS volunteer trailhead steward program that seeks to offer advice at popular sites before hikers take to the trails. Volunteer trail steward Chris Elliot outlined some of his experiences at the Champney Brook trailhead one October weekend in 2018. I checked back with him recently to see how this season had begun. Here are few more observations from the field:

While at Champney my partner and I had an interesting discussion about paper maps. Is one unprepared if he or she hikes the mountain without a paper map? Having a map is one of the Ten Essentials, but it is noted as “a map,” not a paper map. More than 50 percent of the hikers we encountered had maps on their electronic devices, some were downloaded and some were on an app. About 20 percent had paper maps and the rest, upon our advice, took a picture of the trailhead map.

My partner believed that everyone without a paper map was unprepared, while I was more inclined to note as unprepared those who arrived totally mapless. I have asked the WMNF for a response on this, but as of yet have not heard from them. It is certainly an age consideration, as most 20–40-year-olds now seem to rely on their electronic devices for everything, and the idea of getting a paper map appears unnecessary or wasteful to them. As I think you have noted we are in a transitional phase here, another instance where at the moment there is uncertainty with technology versus non-technology protocols and the generation of digital immigrants versus digital natives.

I was at Champney Falls today. Of the 56 hikers who were heading for the summit, 13 had paper maps, 25 had maps on their phones, and 18 arrived with no maps. I noted the latter 18 as unprepared in my report to the WMNF. Interesting data and I will continue my data recording at future dates. WMNF has not asked me to do this, but I am interested in the information. Four others were unprepared as they carried no water.

Comment: I’ve written in the past of my preference for paper maps, even as I’ve written in this report and others of those maps being carried off by winds. Having a map that offers the context of surrounding terrain helps orient a walker, partly by asking for a developed (read, practiced) skill in reading the map and using it effectively with a compass. A map on a screen is necessarily small scale, and what surrounds you is often missing or off-screen. Using a screen to gain a full sense of where one is seems akin to trying to see the scale of the ocean through a porthole. Better, I think, to go up on deck with a chart and scan the horizon.

— *Sandy Stott*
Accidents Editor