

White

Nightmare

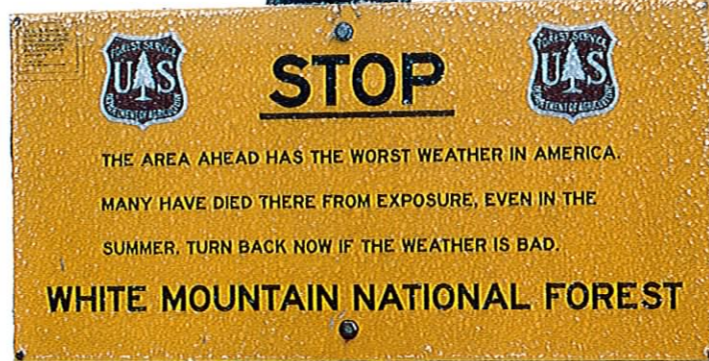
On a crowded day in Mount Washington's Tuckerman Ravine, a human-triggered avalanche sweeps disaster

By Kristen Laine

On Thanksgiving Day, Richard Doucette drove east toward Boston on the Mass Turnpike to pick up his climbing partner. Richard had eaten at his brother's in Shrewsbury. Now, stuffed with turkey, mashed potatoes, and pumpkin pie, he wound along snowy streets to Arlington, the suburb where Scott Sandberg lived with his wife and daughter.

Doucette, the mountaineering-committee chair for the Boston chapter of the Appalachian Mountain Club, climbed almost every weekend. At 43, he'd been climbing for more than two decades. Ten years before, after realizing that everyone he had started climbing with was now married, or had children, or had moved away, he had joined the AMC. Through it he'd found plenty of new partners.

Scott Sandberg, though, had found Richard, through an Access Fund clean-up of a local bouldering area. A novice climber, Scott had broken his leg trying to lead a climb, and he offered to help organize the event while he healed. Richard tried to temper the younger man's enthusiasm: There might not be a lot of volunteers, he warned. But it was Scott who surprised Richard. More than 90 volunteers had shown up, and a bunch of companies had donated gear. No fool, Richard soon invited Scott onto the AMC's mountaineering committee, and once Scott's cast came off, they started climbing together.



Climbers at the base of the Open Books, Tuckerman Ravine. The 140-foot-wide slide on Thanksgiving

In Arlington, Richard threw his gear into the back of Scott's green VW van. He knew that Scott's wife didn't want her husband to leave on the holiday. Scott and his wife rarely argued, he had once told Richard, except about his climbing. This trip would be Scott's first time ice climbing on Mount Washington, though, and he was eager to get going. The men hit light traffic — a rare treat — heading north. It thinned to nothing over the next three hours as they neared New Hampshire's rugged playground, the White Mountains.

The White Mountains had formed in a series of cataclysms designed, it seems, to create a line of mountain soldiers along the northeastern seaboard. At the northern end of the flank stand the Presidential Range and its sentry, Mount Washington. At 6,288 feet, Mount Washington isn't the tallest mountain in the East, but it is the highest point of land for a thousand and more miles in any direction.

Its outpost position coincides with the paths of most major storm systems crossing the country. Storms from the South Atlantic, the Gulf of Mexico, and the Pacific Northwest merge and track along the Atlantic coast, until they hit Mount Washington. The highest wind speed ever recorded over land — 231 mph —

was measured from the peak's summit. In any month of the year, hikers and climbers on the mountain can encounter freezing temperatures. Hurricane-force winds atop Mount Washington occur an average of 110 days a year, two out of every three days in winter. Its arctic maritime climate — bitter cold and heavy precipitation — shrouds the summit in fog and clouds all but 50 days a year. The mountain never loses its permafrost.

Richard and Scott had been tracking the weather all week. Cloud cover and light snow were forecast for Friday. It looked like a good weekend for Tuckerman Ravine, one of Mount Washington's three glacier-gouged cirques. Tuck's was the place to go in New England for early-season ice. Its gullies and headwall froze earlier than anywhere else. From Halloween to Christmas, on good weekends, climbers waited in line to swing their tools on Tuckerman's seemingly limitless combinations of short, moderate pitches. And this year, winter had gotten off to an especially strong start.

It's a fluke of weather and topography that Tuckerman Ravine can be both an ice-climbing mecca and a fabled ski bowl. A broad plateau, Bigelow Lawn, extends above the headwall for a square mile north and south. This "lawn," a flat boulder field tufted with sedges during the summer months, gathers snow in the winter. When the prevailing westerly winds roar in, as they invariably do after a storm, they blow Bigelow's snow right over the lip of Tuckerman's headwall, where it collects. An inch of new snow on the summit can translate into a foot of wind-blown snow in the ravine. That makes the bowl what snow scientists call direct-action avalanche terrain. Every year dozens of avalanches, most of them following winter storms, fling tons of snow into the bottom of the ravine. By spring the snow is more than 60 feet deep.

That skiers can ski in April what climbers need ice axes and crampons to ascend in November makes for efficient recreational use but also creates hazards unique in the Northeast. If snow comes early to Tuckerman Ravine, ice-climbing season overlaps dangerously with avalanche season. Richard Doucette knew this. He'd been reading the online avalanche bulletins issued by the Forest Service. For the first time since the beginning of the month, the avalanche danger on a weekend had dropped below "Considerable."

If snow comes early to Tuckerman Ravine, ice-climbing season overlaps dangerously with avalanche season.

Scott and Richard parked the van at a trailhead south of Pinkham Notch. On Friday they would hike the Tuckerman Ravine Trail from Pinkham Lodge. They noted the clear, star-filled sky before settling into their sleeping bags in the back of the van.

The next morning, two other climbers, Chris Anderson and Mike Strong — both members of a wilderness rescue squad in Stowe, Vermont — started a dark two-hour drive around the northern peaks of the Presidentials toward Tuckerman's. The ice wasn't in yet in their home area of Smuggler's Notch. Just north of Mount Washington, they pulled into a convenience store and bought granola bars for breakfast.

In the bright dimness that precedes morning light, two local climbers parked at Pinkham Notch and started the three-mile hike to the ravine. Tom Stryker hated climbing below anyone, hated the danger and the loss

of control. In the buffet line that was early-season climbing in Tuckerman's, the only way to avoid climbing below someone was to make sure that you got there first. He and Tony Tulip followed a single line of tracks through thin, fresh snow that became ankle-deep near the Hermit Lake caretaker's cabin at the base of the

ravine. Above that, Tuckerman's harsh conditions stunted, dwarfed, and pummeled the spruce trees into krummholz — literally, crooked wood.

Outside the cabin, they glanced at the avalanche danger slat board, which read "Moderate" — level two of a five-tier system — and kept moving. As they trudged the last half mile, Tom repeated two phrases from this Forest Service rating: "Natural unlikely, human-triggered possible." Tom knew these mountains well, having lived in their shadow for nearly 20 years, and took them seriously. He had no problem bailing if he or Tony thought the snow was unstable.

The bowl was untracked above the shelter. No one had beat them to the Open Books, the ice-covered granite dihedrals at the base of the summer waterfall. Tom geared up to lead a short pitch.

Below, at the caretaker's cabin, Jeff Lane cleaned toilets. Jeff, 27, was working his second winter with the AMC, splitting each week between Hermit Lake and Carter Notch. He'd hiked back by headlamp last night after eating a turkey dinner with all the fixings at Pinkham Lodge. After listening to the weather forecast, broadcast from the summit weather observatory at 7 a.m., he'd turned on the cabin's battery-powered laptop to get the day's avalanche bulletin from Forest Service snow ranger Chris Joosen.

Chris had compiled the bulletin from his home in nearby Jackson using NOAA and summit weather observations leavened with 10 years of forecasting experience on Mount Washington. He planned to come up in the afternoon to take measurements in the snow plot below the Hermit Lake shelters.

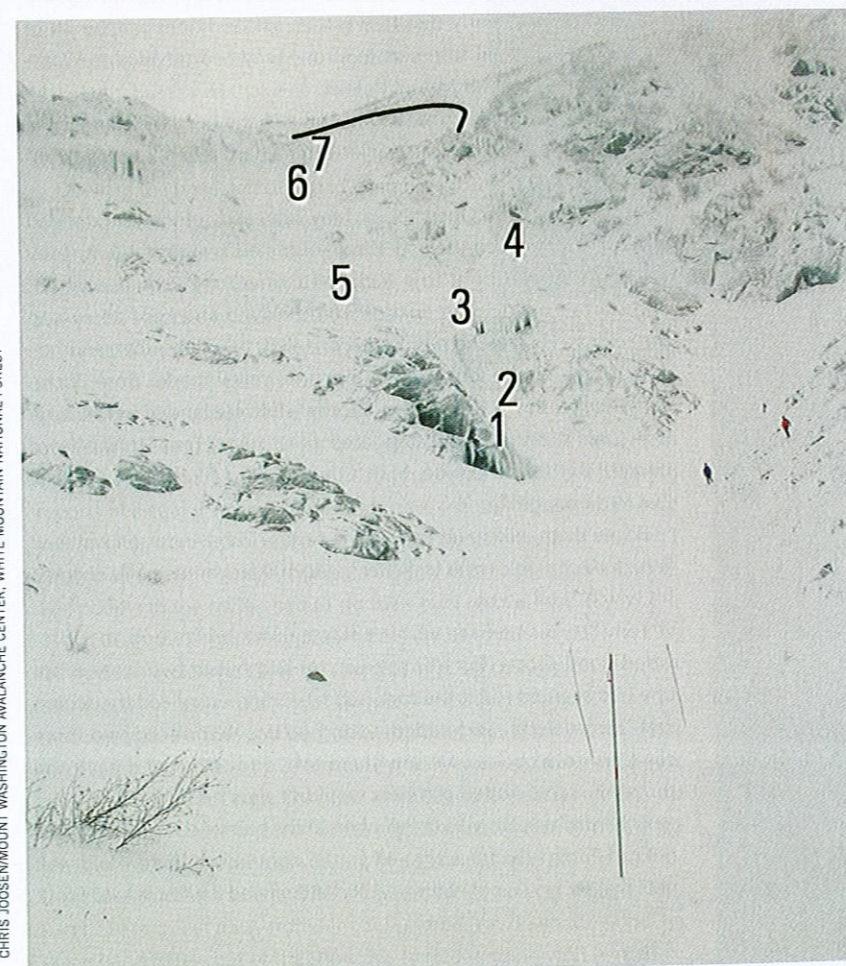
Jeff posted the bulletin next to the weather report. Under the heading were the phrases that Tom Stryker had recited: "Natural avalanches are unlikely and human-triggered avalanches are possible on steep snow-covered open slopes and gullies."

Joosen's report continued, "The summit has received under an inch of new snow over the past 24 hours with very cold temperatures matching the all-time low for Thanksgiving of -14 degrees F. NW winds and very light snow have made for ideal conditions for new loading on SE and E aspects and the cross-loading of others. With even a couple inches of snow significant slabs can form when ideal densities and winds exist. ... New



MATT COUTURE; RONA SANDBERG; DANIELLE TOUTOUNGI

Matt Couture, Rick Coyne and Tom Burke. Close friends for 30 years, they had climbed on Mount Washington dozens of times. Right: Scott Sandberg (top) and Richard Doucette, Boston-area climbing partners. This was Sandberg's first time ice climbing on Mount Washington.



CHRIS JOOSEN/MOUNT WASHINGTON AVALANCHE CENTER, WHITE MOUNTAIN NATIONAL FOREST

The Open Books area of Tuckerman Ravine, in a photo taken the day after the avalanche. The numerals show the climbers' positions when the slide occurred. 1. Scott Stryker; 2. Richard Doucette; 3. Tom Stryker; 4. Tony Tulip; 5. Tom Burke; 6. Matt Couture; 7. Rick Coyne. The wands mark where the buried climbers were found; the top line marks the fracture.



He saw them touch off one sluff, two sluffs, then another.

snow falling on an ice crust won't bond nearly as well as those with snow deposits without a crust.... You may find pockets of instability on the high Moderate end approaching Considerable particularly in strong lee areas of NW and W winds."

After the day's report, Joosen appended several paragraphs of boilerplate, including this: "Pull out your beacon, probe, and shovel and practice, practice! PRACTICE! PRACTICE!! ONLY YOU CAN SAVE YOUR PARTNER!!" Four people had died in avalanches on Mount Washington since 1996, and near-misses occurred each year. Yet most of the climbers who came into the ravine from November to May did not carry what he called the "holy trinity" of avalanche beacon, shovel and probe, didn't know how to assess snow stability, and certainly hadn't practiced saving their partners.

Up in the ravine, Tom Stryker had completed his lead, emerging from technical ice into 20 or 24 inches of windslab snow, a surprise that made him cautious. As Tony began seconding the climb, three climbers started soloing around them.

One went to Tom's left, two simul-climbed to his right. The guy on the left was fast. Tom thought, *He's either really confident or really bold.* The fast climber waited for his friends to catch up. Tom watched them cross a low-angle snowfield to one of the many unnamed gullies on the headwall. Now there were three climbers above Tom and Tony — just what Tom hated.

The three climbers — Rick Coyne, Matt Couture, and Tom Burke — had been friends for 30 years, since high school in Barre, Vermont. They'd been on Mount Washington nearly 100 times, and had turned back early due to weather or conditions maybe 30 of those times. Several summers in a row, they had traveled to Washington State to climb Mount Rainier.

Rick Coyne, the first one, had been hit in the head by falling ice at Smuggler's Notch four years earlier. After a hard rehab, he was climbing better than ever.

Eighty feet up the Open Books, Tony Tulip and Tom Stryker decided to bail. Neither liked the way the soloists had swarmed them. Tony traversed up and right to a rock band where they could walk off, and started building an anchor. Tom belayed and kept an eye on the soloists. He saw them touch off one sluff, two sluffs, then another. A shout made him look up. The one in a yellow parka, Tom Burke, cartwheeled down the gully in another sluff. He landed in the large low-angle snowfield, and staggered a few steps. Tom Stryker heard him yell to the one in blue, Matt Couture, "I'm all done for the day! I've had enough!"

Below them, hiking up toward the cirque, Chris Anderson watched Tom Burke struggle to his feet after falling 100 feet or more. He checked his watch. 11:15 a.m.

Tom Stryker had set up his belay below an ice knob that provided good protection from above. He had put in two screws, but one had seemed to hit the rock beneath. He'd equalized the screws with a cordelette, and added a short screw. He noticed two more climbers down below. He saw them take a rope out of a pack and thought, *Good.* Roped climbers wouldn't pass him.

Richard and Scott were the climbers at the base of the climb. Richard noticed Tony Tulip traversing off to the right above them. He'd wait until that party was out of the way. Richard offered the first lead to Scott.

A climber tackles Tuckerman's short but steep ice ramps in early winter conditions.

PETER COLE

"No, thanks," Scott said. "But I appreciate your confidence in me." Richard took the rope and Scott stepped aside. As Richard leaned forward to tie in, he thought, *It's great to be with a guy who says stuff like that.*

Above, Rick Coyne started over the lip of the headwall and found himself wading through deep drifts. Matt Couture trailed, delayed by checking on Tom Burke after his tumble.

At the base, Scott asked Richard, "What was that?" Richard cocked an ear and heard nothing.

Chris Anderson was just below Levy Rock at the entrance to the bowl when a movement high above caught his eye. He looked up and saw someone in blue flailing below the lip, as if falling.

Belaying below the ice hummock, Tom Stryker heard a yell. It sounded like "Avalanche!" He saw a cloud of snow rolling toward him and thought, *Shit. This is the real thing.* He locked off and pulled himself in toward the ice. Nothing happened for a second or two, then suddenly snow was everywhere. A fine dust swirled around him. Cascades pummeled his back and hood. The snow was light, but the volume crushing. Though he didn't know it, his partner, Tony, was far enough right to be safe from the debris.

At the base of the climb, with a quiet hissing, snow began pouring over Richard Doucette. He heard Scott make a sound. Then tons of snow pushed him to his hands and knees in front of the cliff. He wondered if he should cover his mouth, but feared that if he lifted a hand, the heavy torrent would push him into the snow and suffocate him.

Down in the bowl, Jeff Lane had been hiking up to climb, too. He was near Levy Rock when snow billowed out from a point high on the wall. A fine powder blew overhead. The avalanche stopped only 20 or 30 feet away.

An AMC employee, Jeff was trained for search and rescue, but as a volunteer. He was also the only person in the ravine who had

carried a beacon, shovel or probes. Jeff radioed the Pinkham Notch front desk. It was 11:20 a.m. Chris Joosen was there, investigating reports of illegal snowmobiling. Chris gave Jeff rapid counsel: Be sure you're safe, start a probe line as quickly as possible. Chris wouldn't get there in time to search for a person, only in time to retrieve a body. The people in the ravine had to do their own rescue, fast.

About a quarter of avalanche victims die of trauma — injuries sustained in an avalanche's intense churn or inflicted by rocks or trees. But the overwhelming majority of people buried in avalanches can be recovered alive if they are dug out within the first five minutes. After 45 minutes, only 20 to 30 percent are still alive. Almost no one survives a two-hour burial. Snow that has avalanched is dense and sets up hard. Every moment a victim is not dug out, he exhales carbon dioxide into the snow, eventually dying of carbon dioxide poisoning.

Richard Doucette emerged from the dust to see no sign of Scott, who had been four feet away from him. A hundred feet down the slope, he saw a hand barely out of the snow. He started digging with his hands, and uncovered Rick Coyne, who was in obvious pain but breathing. Confused and focused on finding his partner, Richard felt a surge of anger to discover a face he didn't recognize: *Who the hell are you?* He saw another

arm 40 to 50 feet further down the slope and again dug frantically. He found Matt Couture.

Richard and Jeff tugged at Richard's climbing rope in a hump of snow left by the avalanche. When they could pull it no longer, they started digging. Scott had been carried about 200 feet. He was immediately given CPR. Jeff, organizing the probe, now realized that a fourth climber was missing.

By now, Tom Burke had been buried almost an hour. Chris expanded the probe, using hikers and climbers who had arrived since the accident. About 50 feet up the 400-foot debris field, someone in the middle of the line felt something. A wrist. Searchers followed the arm up to a head. Tom Stryker recognized the yellow parka. He saw, too, that Tom Burke's face was gray. Someone was already doing CPR. Tom did a second check of the man's pulse. Nothing.

The rescuers laid Tom Burke in a litter and began the laborious process of sledding him down to the road. Scott Sandberg and Rick Coyne had already been evacuated. The rescue had taken less than two hours.

Richard drove to the Androscoggin Valley Hospital in Berlin to find Scott. When someone directed him to a state trooper, he knew finally that Scott was dead. He had a long drive back to Arlington to think about what he could possibly say to Scott Sandberg's wife and daughter that could make a difference.

By some measures the rescue in Tuckerman Ravine on November 29 went well. Three climbers in the path of the avalanche had escaped without being buried. Two other climbers who had been almost completely buried were recovered alive. Rick Coyne had sustained only a broken scapula; Matt Couture had been well enough to help with the rescue. A third victim, buried two feet down, had been found in less than 15 minutes. The probe line found the fourth victim on its second pass, a decent

showing for an untrained group. But no one was celebrating. Scott Sandberg, 32, and Tom Burke, 46, had died from massive head and neck injuries.

The next day, Chris Joosen went back up to the ravine and looked through binoculars at the site of the avalanche. At 5,200 feet, the fracture line of the slab ran about 140 feet across the slopes above the lip. It looked to him like the crown face was 12 to 18 inches deep, but new snow had blown in overnight. He wanted to hike up and study the site, but the avalanche danger was too high.

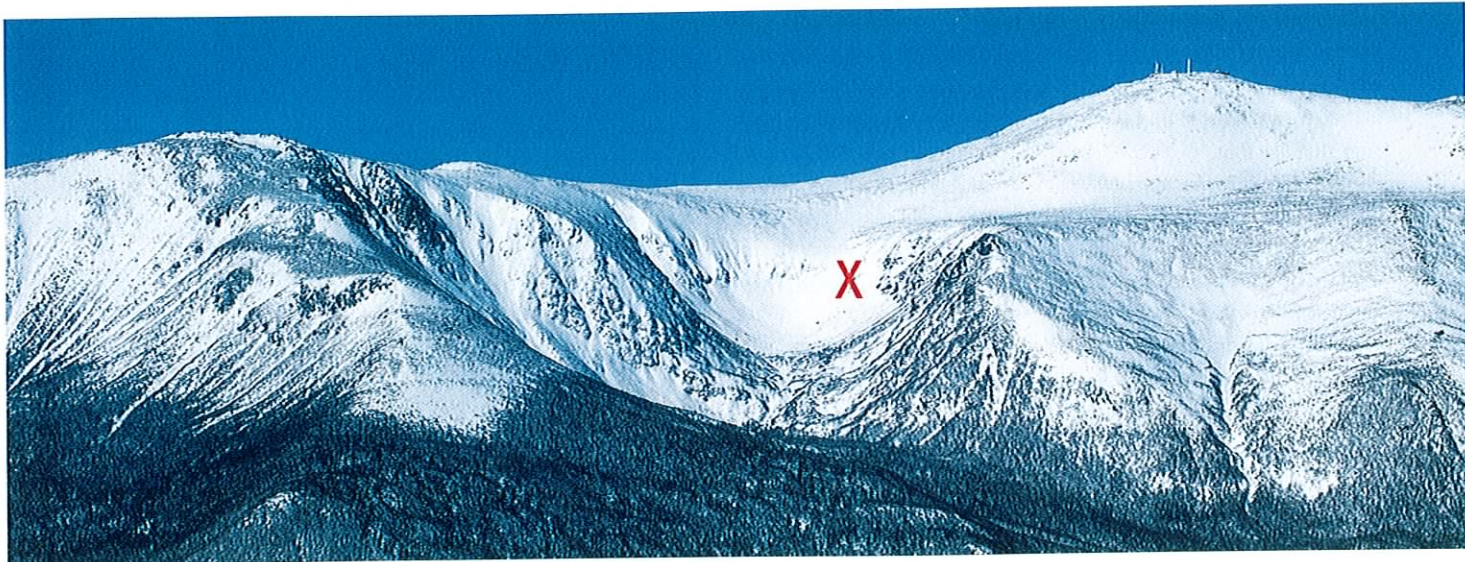
Rick Coyne and Matt Couture had probably stressed a pocket of instability. Snow scientists would say they had triggered the avalanche in a "convexity" above a "roll-over," where a steeper slope stepped back. The avalanche had pulled snow from Bigelow Lawn, increasing its volume. The snow and windslab had probably reached speeds close to 80 miles per hour.

To Chris, Rick Coyne and Matt Couture were like so many climbers he saw in Tuckerman Ravine: experienced and competent at their sport but unpracticed in avalanche safety.

As is the way with these things, eventually fingers were pointed, possibly some butts covered. Much was made of the fact that Jeff Lane was



The avalanche signboard at the base of the ravine. A moderate rating does not mean the slopes are safe from slides.



NED THERRIEN

Mount Washington's east side in late-winter conditions. The scene of the accident is marked.

the only person in the ravine with avalanche gear. Having only one shovel and two probes to start had slowed the rescue slightly, though that hadn't changed the outcome. Chris Joosen heard comments that having beacons wouldn't have saved Scott Sandberg or Tom Burke. His response was that two other climbers had been almost completely buried. If their inches of hand or arm had also been buried, the toll could have been four fatalities.

Chris received his share of second-guessing. Should his bulletins be easier for non-snow scientists to understand? If Chris had dug a snow pit or gone up to the ravine on the morning of the accident, would his assessment have changed?

Nevertheless, as Marc Chauvin of Chauvin Guides International, in North Conway, noted, "Tuckerman Ravine is probably one of the most intensely forecasted square miles in North America."

There was no easy way to explain the anomaly of Mount Washington to the 17 million people who live within a day's drive of its beauty and its dangers. Chris simply continued to put the same word out: Avalanches exist on Mount Washington. Educate yourself. Come prepared. Only you can save your partner.

Passing and soloing were discussed as factors in the accident. No one, though, seriously believed you could ban either practice. You live with them, or avoid popular areas. That was why Tom Stryker, for example, had decided to climb earlier in the morning and much less often in Tuckerman Ravine.

Matt Couture has signed up for two avalanche classes. Rick Coyne and Matt Couture declined to retrace their steps for the media, and who can blame them? No recounting can bring back Tom Burke and Scott Sandberg. Rick Coyne did say to one reporter that after his previous accident involving falling ice, "I kept climbing. But now that it has affected other people, I'm done." Privately, he has expressed grief and remorse over taking that last step.

Richard Doucette believes he made a mistake by setting up for a climb below other climbers. He has made some changes in the climbing program he directs for the AMC. Leaders can no longer take students into avalanche terrain during the course. The committee has also begun subsidizing avalanche training, wilderness first aid, and search-and-rescue courses for its leaders, and hopes to film a video about avalanche safety specifically geared to New England and Mount Washington.

In the Mount Washington Valley, where many people guide for a living, the accident on November 29 continues to have repercussions. Climbing schools and guide services have scheduled more avalanche classes, and most of them are full. The local mountain rescue has agreed

with area guides to share the cost of purchasing avalanche gear, and called for guides to start bringing a beacon, shovel and probe on every trip to Mount Washington.

"This was our wake-up call," Brad White, a guide for International Mountain Climbing School, said later. "Other accidents, we've been able to say they happened because someone went out in considerable or high avalanche danger, or they were stupid. But we've all gone out in moderate conditions."

And this is the rub. Going out just in "Low" avalanche conditions, the only rating below "Moderate," doesn't seem feasible to many who want to climb in Tuckerman Ravine. In the 2001-2002 season, 55 out of 147 forecast days in the ravine were rated "Low" by the snow rangers. Most of those forecasts had been in April and May — ski season, not ice-climbing season.

Richard Doucette thinks a lot about fate these days. He thinks about Rick Coyne, who was swept more than 1,000 feet down a steep and rocky cliff and survived, and about Scott Sandberg, who was carried a far shorter distance and died. A hankering for granola bars added a lifesaving 15 minutes to Chris Anderson's day.

The day after the avalanche, two climbers came to the front desk at Pinkham Lodge. They complained that they'd driven a long way to go climbing. Now that the avalanche danger was too high, all they could do was go for a walk in the woods. The woman at the front desk said to them, "A walk in the woods is underrated."

Kristen Laine is a freelance writer living in Orange, New Hampshire, and the former managing editor of Outside Online.



In memory of Tom Burke, Rick Coyne has established a fund for his teenage son: Eli Burke Benefit Fund, c/o Chittenden Bank, Attn: Marsha Wimble, 292 N. Main St., Barre, VT 05641; (802) 476-0031.



Friends and family have set up a memorial for Scott Sandberg: Scott Sandberg Memorial Fund, Medford Cooperative Bank, 856 Mass. Ave., Arlington, MA 02476.

MATT COUTURE (TOP); SANDBERG COLLECTION