

mountaineering on a half-dozen Cascade volcanoes. She had no experience doing either. S.P. is about 25 pounds lighter than I am.

After getting into harnesses, establishing an anchor, and setting a top rope, I began instruction on rappelling. Fifteen minutes later we successfully rappelled the 30 feet, and spirits were high. I was to climb first, and she was going to watch and belay me. As she was lighter, I tied her into a large, solid, dead log at the base of the climb, with webbing that ran four feet or so to her. She was using a figure-8 as a base-plate to belay from her harness. We established signals, and I began to climb.

About 20 feet up, while talking to her, I lost my handhold and began to fall. S.P. was at this point only two or three feet from the log, and the weight of my fall pulled the rest of the slack between her and the log tight, yanking her towards the wall. She instinctively put her hand up in front of her to protect herself from the wall before the webbing halted her. I felt myself begin to go from a slowing motion to picking up more speed. S.P. quickly recovered and grabbed the rope, squeezing it tight before remembering to lock it down. By the time I had reached the ground, she had received second degree burns to her hands, and they had begun to contract.

### **Analysis**

I had taught several people to climb and rappel, but this was slightly different, as this was someone I had an emotional attachment to. Whether this affected my decision making abilities I do not know, but it is a possibility. There is little substitute for proper instruction from an unattached person. I had anchored her to the log, but I had failed to mention to her to keep the anchor line to her harness taut. A better possibility may have been to establish the anchor and belay from the log. As she was new to the sport, she was not prepared for the jerk when I began to fall. After losing control of the rope, she did her best to regain a handhold, unfortunately gripping it above the belay device. I am happy to say since then S.P. and I have climbed in several other areas, to include the Gunks, without incident, and she and I have grown to enjoy the sport together. (Source: 1LT Michael Wissemann, 86th Combat Support Hospital)

## **FALLING SNOW BLOCK**

### **Washington, North Cascades**

On July 24 at 2:00 p.m., National Outdoor Leadership School Instructor Jon Stamp and five students left their camp on the saddle between Dome and Dana Glaciers. They were traveling in two rope teams of three, wearing helmets and carrying light day packs. They were headed west to scout a route for the next day's travel beyond Spire Creek. The group, led by Gabe (who was to be "leader of the day" on July 25), traversed the slope from camp and then descended on moderate to steep snowfields, ranging from 28-35 degrees at the steepest parts. The slope was interspersed with boulders and small rock bands. Snow conditions were good for this descent, with easy plunge-stepping and three to four inch boot penetration. This was Gabe's third time route-finding in similar terrain on this course. A running belay was not deemed necessary, as the slope angle, snow conditions, and students' experience on similar slopes made the

probability of a “fall” low. The ability of each of the students to self-arrest would be sufficient to hold a “fall” if one should occur. The group did decide that running protection (anchors) would be necessary the next day when they traveled this route with full backpacks and firmer snow conditions of the early morning.

At 3:30 p.m., the roped teams “parallel parked” next to each other to discuss and locate their travel route for the following day. After making a plan, they decided to head back to camp, with the team of Bob, John S. and AJ leading, followed by Dan, Josh and Gabe (at the end). The first roped team had begun moving back up the slope towards camp and the second roped team had just spread the rope out between them and were preparing to move up when they heard a loud sound like rock falling. After John S. yelled “ROCK!” the students on the second roped team looked up to see a block of snow “the size of a refrigerator” heading towards them over a rise and out of the clouds from above.

The block’s trajectory appeared to be at an angle to the fall line, coming from climber’s left across the slope toward the right. The front rope team was out of the path by 35 yards to the right of the block. Dan saw that the block would go to his left and that he was out of its direct path. He then went into self-arrest. Josh saw the block. It appeared to be coming directly at him. He jumped to his right (facing the slope) and attempted to get into self-arrest position. Gabe saw the block and thought it would pass right between him and Josh. He jumped four steps to his left and was in self-arrest when the block hit the rope between him and Josh. Gabe thinks it was possible the rope was taut between them.

All three students felt an enormous tug and were yanked out of their respective positions, into the air, and then onto their backs, sliding and being pulled downhill. They were dragged down-slope approximately 200 yards, through an area where rocks were protruding through the snow. The rope team stopped sliding/tumbling after the snow chunk dislodged from the rope and continued downhill.

Dan was up on his feet almost immediately and was fine, except for a minor injury to his left elbow. Josh (a paramedic for six years) disentangled himself from the rope and made a scan of himself. He felt bruised and had pain in his left foot. He left his boot on, then looked over to Gabe.

Josh saw that Gabe was conscious and lying on his back on the snow, looking up and moaning and groaning. One boot was missing, his pack was off, and he had blood on his face and on the snow around him. Josh crawled over to Gabe and initiated a primary survey, which revealed that, “Gabe was alert and oriented, looked ‘shocky’ and was yelling and crying out in pain.” A thorough secondary assessment from Josh revealed that Gabe’s chief complaint was pain in his lower back and right chest wall. Gabe was lucid though more animated than usual, and Josh did not think he had lost consciousness.

At this point, John S. unclipped from his rope team to assist in the rescue and sent students Bob and AJ to notify the rest of the course. He told them to get Andy (the Course Leader), the drug kit, the radio, and to keep themselves safe while doing it.

Meanwhile, the primary rescuers dug a more secure and protected platform, and then John and Dan (and later Josh) dragged Gabe across the snow approximately 30 yards to the new location. Josh and John worked together to provide medical care for Gabe. They kept him immobilized for potential spinal injury, monitored his vital signs, and kept him comfortable until more help was available.

At 4:30 p.m., the entire group convened at the incident site and set up a station ten yards further right on the slope to provide additional support. At 5:15 p.m., Andy contacted a private pilot, Gary Larson, with a radio message stating "medical emergency requiring helicopter evacuation.... Alpha with a back injury." (Alpha = Critical, single life-threatening injury or illness, urgent response required.) By 6:00 p.m., the group received notice via radio that a helicopter would arrive in two hours. A team of Andy, John S., Gabe, Josh, and Lisa stayed at the incident site while the rest of the group was sent back to camp.

At 8:00 p.m. a helicopter from Whidbey Island U.S. Naval Air Station arrived and hovered overhead. A medic, rescue swimmer, and litter were lowered to assist in the rescue. They hoisted Josh via seat and chest harness, then packaged Gabe onto the litter and hoisted him into the helicopter. At 9:00 p.m. the helicopter departed the scene and arrived at Skagit Valley Medical Center in Mount Vernon, WA, at 9:30 p.m. Gabe's injuries included a fractured pelvis, three fractured lumbar vertebrae, and a pneumothorax.

### **Analysis**

**Weather and Environmental Conditions:** It had rained in the morning, followed by mist, and the weather was slowly improving throughout the day. The group left camp in low visibility conditions. As they descended the slope they came out of the clouds. Visibility gradually improved during the afternoon with patches of sun showing through. Instructors estimated the air temperature to be about 45 degrees, and when the sun periodically came out it would become warmer. The slope aspect is southwest. There were no cornices on the ridge top or other indications of instability in this particular section of the slope.

**Appropriateness of this terrain for these students:** Josh, AJ, Bob, and Dan stated that they were comfortable on the slope and had traveled on steeper slopes with heavier packs earlier in the course. Gabe had led roped teams on similar terrain earlier in the course. John and Andy were confident in Gabe's route-finding ability and felt he made good decisions on that day. He chose the most obvious and least steep route of the options available. The instructors say they would have taken the same or similar line.

**Appropriateness of the practices and procedures used while negotiating this terrain:** Was the lack of running protection a factor? The lack of running protection (anchors) is appropriate in this case. Factors supporting this decision include the student's experience on this type of terrain, the slope angle (moderate to steep), the relative softness of the snow (good footing), the level of supervision provided by John, and the probability of one of the group members falling being low. Most likely if an anchor were in place to arrest a fallen climber, it would not have held the force from the sliding snow block.

Was being roped up a factor? The group was using standard mountaineering practices for travel in this type of terrain. Many of the same practices for placing running protection are considered for whether or not to rope up. Because of the dynamic nature of travel in the Cascades, groups continuously move over varying terrain. Any one travel day may call for situations that demand the use of running protection, fixed lines, fifth-class belay, or none of these. It is common for groups to move between technical sections while remaining roped up. Factors to consider include the consequences and likelihood of a fall, including: the run out, slope angle, consistency of the snow, levels of experience. If the slope is considered “mellow” enough (low angle) to have a low probability of a fall, groups will often travel through the terrain remaining roped up, because to unrope for all of these situations throughout the day would be impractical. This would take a tremendous amount of time and the groups would not get very far and possibly expose them to other hazards.

Another factor is the reliability of students being able to self-arrest on their own. Instructors will often place themselves on a rope team with less strong members in order to provide a backup to the students’ self-arrest capabilities.

Nonetheless, if the group had not been roped up, the outcome would likely have been a “near miss” and not an incident. However, the practice this group was using was acceptable in this case. They were prepared to place protection at any moment, and were constantly analyzing the terrain around them to see if it was needed.

Hazard assessment: Was the limited visibility a factor? The conditions of limited visibility are common this time of year in the Cascades, and it was appropriate for them to be traveling under these circumstances.

As the rope teams were traveling through this terrain just before the incident, they had enough visibility to see that there was no potential rock, ice, and snow fall zones on the slopes immediately around them. The previous day in clear weather they were able to view the route from Dome Peak and identified potential rock/snow fall areas on slopes about a half-mile further west of the incident site. These particular slopes had no bearing on the incident. Gabe carefully selected the route with supervision from John. Gabe chose an appropriate route.

The day after the incident, the rest of the group passed through in clear conditions. Andy confirmed that the snow block was not obvious and would not have been identified as a hazard, had the group been able to see above them the day before. This chunk of snow broke loose from a snow slope that met with a rock wall, and showed no indication that it was separate and had the potential to come down the slope.

Had the rope teams been able to see the snow chunk when it first dislodged, they feel they would have reacted differently to it. It is difficult to speculate on all the “what ifs.” The snow chunk was unpredictable in that it was moving very quickly, it was not following the “fall line,” and there were terrain features (i.e. changes in slope angle and direction) that obscured the block for part of its path from the rope team below.



Gabe, Josh, and Dan all saw the block coming down after it had passed over a rise, before it hit their rope. They all reacted to it by moving (a few steps in each case) and going into self-arrest position.

This was clearly an accident caused by an act of nature. This group happened to be in the path of the sliding snow block. This was a random and unforeseen event, though one that should not be completely unexpected while traveling in steep, snow-covered terrain.

There were no contributing factors, other than being in the path of a falling object, that can be deemed as the cause of this accident. The course was traveling in reasonable terrain and conditions. They were keeping in line with NOLS Accepted Field Practices and general mountaineering practices. The response to the incident was handled well.

We will use this incident as a case study for mountaineering staff. (Source: Drew Leemon—NOLS Risk Management Director and Rachel Knapp—NOLS PNW Mountaineering Program Supervisor)

## HEART ATTACK

### Washington, Mount Rainier

In early August, Lawrence “Laury” Minard (51), a Seattle native who had moved to London to edit and write for *Forbes Global Magazine*, collapsed and died around 12,000 feet up Mount Rainier during a guided climb.

The Pierce County Medical Examiner’s Office on Friday reported Minard died of arteriosclerotic cardiovascular disease, or ASCVD. The condition occurs as fatty plaques build up on artery walls, limiting blood circulation and placing too much strain on the heart. Mountain guides who fought for 45 minutes to revive Minard said he stopped breathing soon after his collapse and never regained consciousness.

Minard’s collapse occurred while he was climbing with a guided party up Disappointment Cleaver, an outcrop of 45-degree rock bordering Rainier’s Emmons Glacier.

Guides with Rainier Mountaineering Inc. say Minard complained he was having difficulty catching his breath and needed to rest. He unclipped from the climbing rope and sat down, but he collapsed and stopped breathing minutes later.

RMI guides halted the climb and performed CPR and other emergency measures, said Peter Whittaker, Operations Manager for RMI. The efforts were witnessed by the other RMI clients, including Minard’s 16-year-old daughter, Julia. Minard’s body was later flown off the mountain.

Park rangers say the zig-zagging route up the Cleaver is usually the steepest and most exhausting portion of the most popular route up 14,410-foot Mount Rainier.

“It’s generally a spot where climbers recognize whether they’re going to make it or not. The top of the cleaver is a common spot for people to turn around and head down,” said Mike Gauthier, lead climbing ranger at Mount Rainier National Park. Climbing the mountain “is still really an almost extraordinary effort for people who are at a reasonable fitness level,” Gauthier said. “At the top,