down the mountain to go for help. It was reported up to us that Dan had suffered a serious head injury and was having difficulty with his right arm and shoulder. Jeff and Kevin were concerned that Dan could have a shoulder separation with a broken arm. After bandaging Dan's head wound, he was helped to climb up and over to where the Seattle Mountaineers party was. There he was anchored in. After Dan was taken off our rope, Kevin and Jeff climbed over to where he was. Together with the remaining two members of the Seattle Mountaineers party, we discussed what should be done next. It was decided that we should try to work Dan down the mountain to the Mary Green Glacier some 80 meters below. We felt that if help did come that night, they would only be able to take Dan out if he was down off the rock. It was also just as important that Kevin and Jeff be doing something rather than just sitting helplessly.

Dan was first placed in a bivy bag to help keep him warm, then Jeff's 50 meter rope was configured such that Kevin and Jeff could be lowered alongside Dan. Although Dan was incoherent, he was conscious and able to assist in his rescue by pushing off the rocks with his hands and feet. It should be noted that his ability to contribute to our efforts was a major factor in our success. It was a very difficult finding belay positions in the badly broken and fragmented rock. It took nearly seven hours to move Dan down to the glacier below. Once on the glacier, Dan was put in dry clothes. Just as we were finishing, a helicopter was noticed coming up the valley toward us. The helicopter pilot landed in a very precarious position on the glacier and said he could only stay a few minutes due to fuel considerations. We quickly loaded Dan onto a sled which they supplied and slid him up along the edge of a crevasse to where the helicopter lifted off. (Source: From a report submitted by Dan Ferguson)

Analysis

The conditions of Bonanza Peak on the day of our attempt were very poor and not conducive for climbing. Several other parties had come to make the attempt also. All but one other party turned back due to the conditions. The other party attempting the climb stopped and aided us in bringing Dan down off the peak after the accident. The climb should not have been attempted under the conditions.

For greater safety and ease on the descent or a possible rescue, two nine millimeter ropes should be used. This would have been very helpful on Bonanza because of the distance between suitable rappel anchors.

And, finally, the members agreed they would never attempt another alpine ascent without helmets. (Source: From reports submitted by Dan Ferguson and the Boeing Employees Alpine Society Bulletin, August 1986)

FAILURE TO FOLLOW ROUTE, RAPID ASCENT, PARTY SEPARATED, CLIMBING UNROPED, WEATHER

Washington, Mount Rainier

On July 5, 1986, climbers Frank Amenta (24) and Philip Rosenthal (33) became disoriented in a white out and descended Willis Wall instead of their intended route of the Emmons Glacier followig their successful ascent of Liberty Ridge on July 3. The climbing party bivouacked at 3680 meters on Willis Wall on July 4 and continued their descent of Willis Wall on July 5. Rosenthal fell behind Amenta due to altitude sickness and possible pulmonary edema, and they became separated on July 5 around 0900 near the 3520 meter level of the East Rib of Willis Wall. Amenta descended solo and suffered a broken

leg around the 2750 meter level of Willis Wall. Amenta was rescued by myself and Ranger Chase from the 2630 meter level of the upper Carbon Glacier utilizing a Bell 206 helicopter at 1945 on July 5. Amenta was evacuated to Kautz Creek and transported by ambulance to Good Samaritan Hospital in Puyallup where he was admitted with a broken leg. Rosenthal was located by helicopter on July 6 at 0720 at the 3375 meter level on the west flank of Curtis Ridge. He was rescued via a one-skid landing from a rock outcrop by the Bell 206 helicopter after indicating to me via hand signals that he wished to be rescued and was sick/injured. Rosenthal was evacuated to Kautz Creek and transported via ambulance to Good Samaritan Hospital at our request for evaluation of possible pulmonary edema. Rosenthal reportedly refused treatment at the hospital and was released by ambulance crew enroute. (Source: Roger Semler, Ranger, Mount Rainier National Park)

Analysis

This incident appears to be a classic example of climbers getting into terrain beyond their capabilities after becoming disoriented in whiteout conditions and getting off their intended route. It also appears that their rate of ascent contributed to the altitude sickness and pulmonary edema experienced by Rosenthal. Both of their packs were extremely light and I question their preparedness for multi-bivouacs on the upper mountain. During the actual rescue, there was no doubt in my mind that both victims desired to be rescued. In particular, the situation with Rosenthal warranted immediate rescue due to the objective rock and ice fall hazards he was subjected to and his confirmation via hand signals that he wished to be lifted off the wall and was also sick/injured. The successful use of the one-skid landing on Willis Wall also proved to be the quickest and safest rescue technique considering all the objective hazards and the uncertainty of an ETA for a hoisting-capable helicopter. (Source: Roger Semler, Ranger, Mount Rainier National Park)

AVALANCHE, WEATHER

Washington, Mount Baker

On August 3, 1986, Ian Kraabel (23), director of Summit Mountain Guides from Seattle, was guiding Steve Raschik (21), Tom Waller (19), and Kurt Petellin (20) on a climb of Mount Baker after two days of mountaineering instruction on the lower slopes of the glacier. The three students had no prior mountaineering background. The weather was clear, calm and warm—typical of early August.

They got an early start from their camp at the base of the glacier and were well under way by 0330. They followed the standard route up the Coleman Glacier to a point about 2700 meters, where they diverted to the base of a steep snow slope above which hung an ice fall known as the Roman Mustache. The party stopped and discussed whether to return to the standard route on the Roman Wall or climb to the summit via the ice fall. After about 30 minutes, the party began to move again—up the slope toward the ice cliffs above.

All four were roped together on a nine millimeter spiral laid rope (similar to REI Skyline rope, but not UIAA rated). The route goes directly up an open, broad gully about 120 meters where it exits to the left on to a sloping snow ledge that traverses upward below the ice cliff until it connects with a steep snow slope leading up and out of the exposure of the ice cliff. At 0700, the guide led the rope team up the gully and was