

past Armitage, and fell 2000 feet. His helmet, type unknown, was smashed and torn from his head and was found near his body. He had severe head and other injuries and no doubt died during the fall. His ice axe and crampons were not found. (Source: L. Michaud and T. S. Gain.)

*Analysis:* Chisholm had had difficulty with his crampon straps twice before his fall, and perhaps they failed. If he had been roped the accident might not have happened, although the mountain is usually climbed unroped for most of its height. Perhaps crampons should not have been worn as they can cause difficulties on mixed rock and snow. (Source: L. P. Michaud.) It appears from this and other accidents that ice axe arrests fail in reality more frequently than tests on practice slopes suggest. Unfortunately, the state of the snow he was trying to stop on was not recorded. (Source: E. Whalley.)

*SLIP ON SNOW, AVALANCHE, AND INEXPERIENCE—British Columbia, Mount Robson, Kain Face.* Brian Darragh, Claude Ribordy, Jan Straith, Frank Campbell, and Robin White were descending the ridge bordering the Kain Face of Mt. Robson on July 30 due to bad weather when they suffered two accidents. They were tied together on one 250-foot rope. The first accident occurred at 10:50 a.m. when one member slipped as they were leaving the ridge to descend a gully toward the Dome Plateau, and pulled several others after him. The party was stopped by the rope catching on rock outcrops and by the efforts of a belayer. There were no injuries except abrasions and a few bruised ribs, but some equipment was lost and the party was demoralized.

The descent slope was covered with soft, unstable wet snow that had probably fallen during the preceding two days. The party was very slow, and at 3 p.m. was still on the snow. A small avalanche swept them down the slope, pulling out several snow anchors that they had placed as running belays. They slid over the bergschrund and stopped as the slope eased. One member fractured a vertebra in his lower back, and another had pulled several ligaments free in his left leg. Tony Daffern, a member of the Calgary Mountain Rescue Group, was climbing nearby and helped to set up a tent to shelter the victims, and sent several people for help. The injured climbers were evacuated by helicopter the following day. (Source: L. P. Michaud.)

*Analysis:* The initial decision to descend from the ridge by that route was a poor one, and was caused mainly by the lack of a designated leader. The conditions were poor. The party descended slowly because it was shaken by the first accident, and some members were inexperienced on ice and snow and this lengthened the time of exposure to avalanches. Fortunately, major avalanches did not occur. (Source: L. P. Michaud.)

*FALLING ROCK—British Columbia, Moat Lake, Mt. Bastion.* Dave Morris was leading Roman Babicki and Rene Torn up a small gully on Mt.

Bastion at 10:30 a.m. on August 2 using two 11 mm ropes with a view to belaying both Babicki and Torn at the same time. Babicki was belaying Morris from a small depression in one wall of the gully and was tied in securely with a sling. A very large rock, which he probably dislodged, appears to have fallen on Morris. It pushed him down the gully and began to break up, and knocked Babicki from his belay stance. Babicki's sling held, and he was able to hold and secure Morris on the two ropes about 20 feet below his belay, but burned his hand in doing so. Morris was lowered a further 10 feet to a ledge and secured. His chest was crushed and he had other injuries, and died about one hour later. (Source: Ron Matthews.)

*Analysis:* This kind of accident is difficult to avoid as mountains are continually eroding. There are many rocks that will fall at a touch, and we can only be exceedingly careful when we do so on a mountain. (Source: E. Whalley.)

*FALL ON SNOW—British Columbia, Mt. Lefroy.* Bill Tarchuk, Mike Krinsley, and Su-Chong Lim started to climb the east slope of Mt. Lefroy from Abbot Pass on August 6. Low down, the snow was soft with a mushy crust, but steepened to 35-40° and the crust became harder. When they were about 700 feet up, the weather deteriorated to a moderate snow fall and fog with visibility about 50 feet. They started to descend roped, but they unroped after several successful self-arrests. Lim stumbled and was able to stop himself but was dislodged by a small avalanche of the new snow on the crust. He stopped himself but was dislodged four or five more times, although his axe head was buried in the crust. As he was sliding down a snow chute that dropped over a cliff toward Lake Oesa, he drove the shaft of his axe hard into the snow after his next arrest. He was swamped by a pile of snow 18-26 inches deep, but was able to hold himself. (Source: Su-Chong Lim, *The Chinook*, Calgary Section of the Alpine Club of Canada, December 1977.)

*Analysis:* The hazard of fresh snow on a slick but only moderately firm crust was not recognized. The arrest might have been better if the boot toes had been used more effectively. If the party had been roped, perhaps more snow would have been dislodged by the sliding rope and made it impossible to stop himself. (Source: Su-Chong Lim.)

*FALLING ROCK, NO HARD HAT—British Columbia, Bugaboo Range, Eastpost Spire.* Julia Peck (15) was standing at the bottom of a chimney on Eastpost Spire on August 8, while Mary Witt (14) was climbing it, belayed by Bean Haworth (22). Witt stepped on some chock stones, which fell, and hit Peck on the head. She needed two stitches. (Source: Susan Shaw.)

*Analysis:* If Peck had worn a helmet, no injury would have been caused. (Source: Susan Shaw.)