A fourth night was spent just below the summit icefield. Exhausted and hungry, she had begun to make her way up the icefield on August 13 when she was spotted by rescuers.

The pair had not registered with park wardens prior to the climb, but their vehicle attracted attention after being parked for four days on the Moraine Lake road. Examination of the vehicle indicated that it belonged to mountaineers and an aerial search was initiated. After M.Y. was spotted, a radio was dropped to her by helicopter. Communications with her were translated by tourists from Japan who passed by the staging area, and later by a translator who was also a mountaineer. After the details became apparent, a rescue group was slung onto the mountain to pick up M.Y. and locate M.A. When he was located, a rescue team, including a physician, was slung into the Black Towers and the physician was then lowered to the victim, who was found to be dead. Sometime after M.Y. had left, M.A. had rolled off the sloping ledge. He was found lying in the steep chimney supported by the rope. Cause of death was exposure and shock, complicated by venous stasis—blood pooling in the legs. Venous circulation was impaired by the leg loops on the harness after he had slipped from the ledge. (Source: Clair Israelson, Banff National Park)

Analysis

Although the climbers had moved relatively slowly due to heavy packs, they were well equipped to handle the longer duration of the climb. But they were apparently unaware of a quick, easy detour around the Black Towers, which would have been preferable given the poor conditions. On the day of the fall, the climbers were cold, wet and moving on treacherous terrain. After the fall, M.Y. was unable to raise M.A. onto a suitable bivy site.

Failure to use the voluntary registration system increased the delay from the time of the accident to the start of the rescue.

One final note reflects on the attitude of certain climbers. On the day of the rescue operations, a second group of climbers was moving onto the summit icefield from the East Ridge. Their reaction upon seeing the rescue helicopter was to flash a common visual signal of displeasure. They continued a short way along M.Y.'s trail, then made an obvious detour around her, although she was in plain view and a rescue operation was obviously starting. (Source: Clair Israelson, Banff National Park)

AVALANCHE

Alberta, Rocky Mountains, Mount Charlton

A party of three registered at the Jasper Visitor Center on September 16, 1983, and were cautioned that climbing conditions were marginal. The next day they took the charter boat up Maligne Lake and established a base camp on Mount Charlton at 2600 meters elevation.

On Septemer 18, they left camp at 0800 and very slowly worked their way up moderate snow and ice to a prominent rock buttress about 3100 meters on the ridge. It was then noon and, as it was evident that they would be unable to complete the climb in daylight, they decided to head down.

They descended roped toward the glacier. As they diagnonally crossed a relatively small but steep (35 to 40 degree) snow slope, they released a slab avalanche which was about 50 centimeters high at the crown and 30 meters across. It carried them

down about 100 meters. One of the climbers (24) was left on the surface but had an injured ankle. A second (24) was partially buried. The leader (25) had been pushed head first into the bergschrund and buried to a depth of two to two and a half meters. His friends followed the rope and proceeded to dig for him. He was recovered at 1430, but could not be revived in spite of the administration of CPR for half an hour.

The two surviving climbers, both of whom had sustained injuries, returned to their camp, and the next day made their way to Maligne Lake where the accident was reported to the Maligne Tours boat operator. (Source: Gerry Israelson, Jasper National Park)

Analysis

There were approximately 30 centimeters of new snow at the upper elevations of the mountain and moderate winds had formed pockets of unstable snow. Contributing factors to this accident include the failure to recognize hazardous snow conditions and poor route selection. (Source: Gerry Israelson, Jasper National Park)

FALL ON ROCK, INADEQUATE PROTECTION, INADEQUATE EQUIPMENT, EXCEEDING ABILITIES British Columbia, Kamloops Area, Marble Canyon

On May 7, 1983, Bob Boonstra (32) fell while climbing at Marble Canyon with three companions, Simon Fitzsimmons (17), Amund Groner and Denis Raimbault. Marble Canyon is a 600 meter limestone exposure located about 120 kilometers west of Kamloops, British Columbia. It is visited occasionally by climbers but has few well-established routes. The following is edited from Boonstra's account:

We arrived at the Pavillion Lake parking area at about 0930 and decided to climb two different routes to avoid dislodging loose rock onto each other. Simon and I paired up to climb together for the first time.

Upon reaching the base of the cliff (a short scramble from the road), we agreed that I would lead the first few pitches. I set up the belay system using my Sticht plate and anchored the belay to a pine tree on a wide ledge. With Simon belaying, I climbed upwards for about nine meters and put two placements into the crack. A single sling was attached to reduce rope drag.

I was about eight meters past the runner when I slipped. I called out to Simon that I was about to fall then dropped an estimated 15 meters onto sloping rock out of his view. The rope did not pull tight. Simon pulled up the slack (about a meter), secured the rope, and came to investigate. After finding that I could not move, Simon called to Amund and Denis for assistance. They retreated from their position and arrived after about 30 minutes.

Unable to move myself, in pain and shock, I insisted that they try to move me to more level ground. They carefully slid me about 80 meters, securing me in a reasonably horizontal orienation. This procedure took some time because of my condition and the tangle of equipment which snagged on rock and vegetation. When I was positioned as comfortably and securely as possible, Denis left to summon help. Two ambulance teams arrived an hour or so later. Evacuation by stretcher took a further few hours with the assistance of ten to twelve persons. Injuries were later identified as abrasaions to the right hand, multiple pelvic and vertebrate fractures, and a fractured left elbow. (Source: Bob Boonstra)