

### **Analysis**

R.W. was very familiar with this climb, as this was his third time there this season. He is also a very competent and experienced ice climber. Haste may have played a role in this accident. It is possible the hook placement of the ice tool was not weighted and tested before he pulled out his other tool. The constantly changing nature of the ice may have also been a factor. R.W. may have been successful with hook placements the week before, but on this day (a cold one) the hardness of the ice may have made a similar placement less secure.

## **FALL ON ICE, INADEQUATE PROTECTION**

### **British Columbia, Golden Canyon, Lady Killer**

On March 11, while leading the first pitch of Lady Killer (II W13), A.M. fell after placing three screws on the first half and then running it out to the top. He fell to the ground and sustained pelvic and spinal injuries. Volunteer SAR groups from Golden responded by ground and treated the patient. Since the injuries were severe and lowering the patient problematic, assistance was requested from the Warden Service of the National Parks nearby. The patient was evacuated to an ambulance below by Heli-sling by Warden Service rescue crews.

### **Analysis**

Even on easier angled ice, topping out on a pitch can have disastrous results if no protection is available. In this case, the climber pulled out both his tools and was severely injured. (Source: Parks Canada Warden Service, Marc Ledwidge)

## **SLIP ON SNOW, CLIMBING UNROPED, UNABLE TO SELF-ARREST, INADEQUATE EQUIPMENT**

### **British Columbia, Selkirk Mountains South, Mount Billy Budd**

On August 18, J.C. and G.H. departed from a climbing camp located on north side of Houston Lake on a "day off" hike to Houston Pass at about 1200. J.C. was a very experienced mountaineer with between 20 to 25 years experience. The two climbers were outfitted with mountaineering boots and ski poles, but had no rope, helmet, crampons, ice ax, or climbing gear. Upon reaching the Pass, J.C. and G.H. followed the south-east ridge from Houston Pass that went over the Vere Summit to the summit of Billy Budd. The climbing was uneventful and was enjoyed immensely by J.C. and G.H. as it was a beautiful day. After resting at the summit of Billy Budd, J.C. and G.H. started their descent to the Houston Lake camp with J.C. in front, basically following the route of the previous day's Mount Billy Budd climbing teams. They initially followed tracks across a glaciated section (crevasses easily identified and navigated around) and then scrambled down on rock outcrops. About 1815, mid-way down the descent, at a point about 250 to 350 vertical meters above camp, J.C. and G.H. stepped off a rock outcrop to again follow tracks, this time on a traverse of a northwest-facing

snow patch. Within a few steps onto the snow, J.C. slipped and started sliding down the snow which had a pitch of 45 to 50 degrees. J.C. had no ice ax, was unable to self-arrest, and slid 300 meters on the snow—and then tumbled 20 meters onto the rock at the bottom.

Several members of the group went to the accident site. It was apparent that J.C.'s chances for survival were slim. On August 19, J.C.'s body was recovered by Alpine Helicopters.

### **Analysis**

It is unclear why the climbers would choose to cross glaciated terrain unroped and why they carried neither crampons nor ice axes whilst choosing to be on snow slopes with an angle of 45 to 50 degrees as described. J.C. was found to have died from severe head injuries. It is unclear whether a helmet would have made a difference in the outcome in this case. It is also unclear whether the ability to evacuate the victim immediately by helicopter would have made any difference to the outcome given the injuries described. (Source: Greg Hill)

## **SLIP ON SNOW—UNABLE TO SELF-ARREST**

### **British Columbia, Selkirk Mountains, Palisade Mountain**

On August 19, two members of a week-long climbing camp based at the Great Cairn Hut were descending the north side of Palisade Mountain on intermittent snow slopes. Around 4:30 p.m., and approximately 200 meters above the glacial valley floor, D.M. was walking sideways across a 35-degree, 20-meter-long snow slope when his foot slipped. D.M. tried to self-arrest with his ax but failed. He accelerated down the snow slope, hit a medium sized boulder at the end of it and continued to tumble over rock talus for a further five meters. M.E., who had been descending through the adjacent scree and boulders, reached him quickly and immediately carried out a thorough primary assessment, administered required first aid, and spent time ensuring that D.M. was comfortable while discussing the options of what to do next. It was clear that D.M. had a serious hip injury and that a helicopter evacuation would be required. D.M. was also experiencing some problems with breathing on his left side, and minor internal injuries were suspected even though his ribs appeared to be unbroken. M.E. hurried on to the Great Cairn Hut to summon help, arriving around 5:30 p.m. A satellite phone rented for the camp was used to call Alpine Helicopters in Golden.

The rescue team and their equipment had to be slung in on a long-line from a staging area at the bottom of the slope. D.M. was stabilized with a body air splint and prepared for helicopter evacuation. The crew and patient were in flight for the Golden hospital by approximately 8:00 p.m.

After full x-rays of his neck, spine, ribs, and hip, and failure to relocate his left hip into its socket, D.M. was transferred to the trauma center at Foothills hospital in Calgary. The dislocation movement had broken the hip joint and there were also a number of bone chips. D.M. now has a