



AAC Publications

Avalanche – Fatigue, Failure to Heed Warning Signs

Canada, Alberta, Jasper National Park, Diadem Peak

Late on July 19, a group of three hiked to a bivouac below Diadem Peak. They arrived at 2 a.m. and slept for a few hours. The temperature overnight remained warm at around 4 C. A clearing trend was under way after a week of precipitation. The climbers' goal was the southeast face of Diadem Peak (3,311 meters/11,060 feet).

They departed camp at approximately 7:30 a.m. Shortly after the first direct sunlight reached the slopes, a small (size 1) loose wet avalanche ran down a drainage channel on the slope they were ascending. Since they were within meters of their intended traverse out of the couloir, they continued. Near the end of the long leftward traverse, one of the climbers felt the risk of another avalanche was too great, and she decided to wait in the rocks for her companions to return. The two others continued into the next couloir. They were almost at the point where they would leave this feature when, they believe, they triggered a size 2 slab avalanche. They both were carried down the mountain.

One of the climbers remained on top of the debris throughout the slide (with some effort). Once they stopped moving, he excavated his partner, whose head and torso were buried. He then activated his Garmin inReach and radioed for help. Although initially unconscious, the second climber quickly regained his senses. (His helmet, which had been badly damaged during the avalanche, had likely saved his life.) Although suffering a broken ankle and a lacerated chest from his partner's crampons during the avalanche, the first climber was able to move his injured partner to a position that was less exposed to the danger of serac fall and provide information to rescuers. A rescue team responded, recovering all three climbers.

ANALYSIS

An unusually wet and cold summer had contributed to a lingering and unstable snow-pack at the time of the accident. Precipitation gauges at Job Creek and Southesk showed that 25 to 38 mm fell between July 14 and July 20, with around 12 mm falling on July 19, the day before this incident. Furthermore, after cool temperatures on July 19 (and associated snowfall in the alpine), the freezing level spiked upward on July 20.

The Public Avalanche Bulletin for Jasper National Park issued May 13, 2019, which was valid until further notice, warned of spring conditions and stated, "Traveling early in the day is recommended, as conditions can change rapidly in short periods of time due to daytime warming" and "When the sun comes out, temperatures soar above freezing, or rain falls, expect wet loose avalanches and cornice failures. This is especially relevant in steep, high-consequence terrain, such as gully climbs...."

The climbers' late arrival at their bivy and their fatigue once there resulted in a late start. The warm overnight temperatures and cloudy skies had not produced the desired overnight freeze. These factors contributed to the increased avalanche danger on the day of the accident, and their exposure increased as the day warmed up. One of the trio, it appears, had come to this conclusion but was unable to deter her companions.

The group was not carrying avalanche beacons, shovels, or probes. However, all the group members carried good communication tools, which resulted in rapid and effective notification of Jasper's

rescue team. (Source: Rupert Wedgewood, Jasper National Park Visitor Safety.)

Images

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