

*Art Davidson makes the following comment: "Terris Moore has noted that the average barometric pressure on McKinley's summit (which indicates the PPO₂ of concern to physiologists) varies from 426 in January to a mean of 459 in July. Roughly, this means that in atmospheric terms McKinley is about 1,800 feet higher in winter than in summer. . . in this light the altitude at which the two parties were caught by storms can be considered approximately the same."

One of the men who survived 6 days in winter at Denali Pass feels that the key to their survival lay in getting into their snow cave immediately, and that if this had not been done, they would have been lost.

Alaska, Mt. McKinley. On 3 August William Phillips (31), Del Langbauer, Boyd Everett, Jim Underwood, and Clarence Serfoss were descending the Cassin Ridge which they had successfully ascended. They had reached 15,500 feet without event. At this point the route passed through a section of mixed rock and ice for about eight rope lengths. On the ascent they had found many Italian ropes in place. They paralleled these with their fixed ropes. At 15,300 feet the route crosses the Rib pitch so named because a series of vertical flakes which stick out toward the climber resemble a rib cage. This rock is sound but rough. When Phillips, who was last, arrived at this pitch, he found that their fixed rope which had crossed this section had been pulled on the ascent and had not been replaced. The four climbers below had used Cassin's 6 mm. Perlon rope. As he descended this the rope suddenly came free. He fell free about 5-10 feet landing on his feet. Due to his pack of about 50 pounds, he then fell over backwards and slid down a snow covered ice slope for about 50 feet. His fall was stopped by a partial self arrest and entanglement in a lower fixed rope. During the slide he careened off several rocks on the slope.

Injuries were initially diagnosed as a sprained ankle, and a loss of confidence in fixed ropes. The descent continued slowly to Camp 3, 1,300 feet below. After spending the night there Underwood, Serfoss and Langbauer began the descent to Advanced Base Camp, arriving after a difficult 16 hour trip. Phillips and Everett were left at Camp 3 with five days of food. The plan was to allow a few days for Phillips' ankle to improve. At noon on the 8th of August Everett and Phillips had reached the fixed ropes below Camp 1 after descending slowly for one and a half days. At this time they met Langbauer and Serfoss who were ascending, and who were able to relieve Phillips and his pack. All descended to Advanced Base Camp. Following one day of storm here all descended to Base Camp except Phillips who was able to proceed only part of the way. He remained at Hank's Place with ample food and fuel, to be flown out from this elevation by Sheldon on 10 August.

X-rays in Fairbanks on 14 August revealed a broken right medial malleolus. Treatment on the mountain consisted in rest (3 days) and taping.

Source: William Phillips.

Analysis: (Phillips) This accident, though potentially quite serious, was nothing more than a delay and a nuisance. This was true since the group was strong, well prepared, and patient. The freedom to remain at Camp 3 for three days with ample supplies was essential to allow Phillips' ankle to improve. The fact that a helmet was worn and a pack probably pre-

vented further injury. Bell Toptex helmet showed a number of cracks as a result of impact during the fall. (Helmets were worn by all members and considered by all to be essential on this route due to the danger of falling rock and ice.)

A number of points are revealed by the accident which could have prevented it or lessened its severity.

1. It is not known whether the Cassin rope was cut on the ribs of the Rib pitch or a piton (rock) pulled out. In either case we should have replaced our fixed rope and not used an old one even though it was in good condition visually.
2. When using fixed ropes on rock pitches, the climbing rope should pass through pitons (via carabiners). Without this precaution a fall could potentially be 300 feet before the climbing rope became taut. The use of pitons on the climbing rope could reduce this to a tolerable level.
3. Self arrests are not particularly effective when you are sliding on your back, head first, with a heavy pack on. The only solution is to resort to the technique in #2.

Alaska, Chugach Range. On 7 August Naoyuki Morita (26), Tadao Inagaki (25), Junji Nakamura (43), and Yoshihara Mikama (31), were finishing up 10 days of scientific research on Eklutna Glacier prior to returning to Japan. These four with four others had participated in the second ascent of Mt. Hess, 11,940 feet, in the Alaska Range in July (none of these to top). They were traversing an easy slope below the Mountaineering Club of Alaska Cabin used as their base when Mikami snagged a crampon (presumably on his trousers) and fell. Inagaki tried to stop him and was also knocked down. They slid and fell into a crevasse. Inagaki suffered a broken leg. Mikami had severe head and chest injuries and was unconscious for a number of weeks and may have suffered permanent brain damage.

Source: J. Vin Hoeman.

Analysis: It was a place a skilled party could easily traverse unroped with care. Had they been roped and belaying from adequate anchors, had Mikami not tripped over his own crampon, or had he been able to arrest his own fall before it gained momentum, the accident would have been prevented. No hard hats were worn. Had Mikami worn one he might not have received such serious head injuries.