

tape so as to sell it in reels of exact length. Other climbers have purchased spliced webbing, including one who used it as a running belay sling. Obviously, climbing equipment shops should put an end to this custom. Climbers have an equal responsibility to inspect their gear closely, which means that no working length of rope or webbing should be covered with tape.

*Washington, Mount Adams.* On February 3rd Keith Edwards (age 24) and Dwain Hess (19) established a base camp below Goat Butte at the foot of Mt. Adams. Their purpose was to scout the area for a later climb by a larger group, possibly up the Rusk Glacier. On the 4th, in excellent weather, they climbed the mountain via the Wilson Glacier. On their descent they fell over an ice wall near the top of the Lyman Glacier. It is not known whether their fall was caused by a slip, by a small ice avalanche, or by mistakenly taking the wrong route. Hess died at the site of the fall, and his open down jacket suggested to rescuers that he never regained consciousness. Edwards suffered a fractured skull and broken leg and ribs in the fall. With bare hands he was able to pull himself forward through the snow for about a mile toward their camp before he died. The two climbers were first reported missing by friends on the 5th, their camp was located on the 7th, a barely visible trail led to Edwards' body on the 8th, and Hess was found on the 9th. Bad weather prevented the evacuation of Hess's body until the 23rd. (Sources: L. K. Buchanan, Hal Foss, Gordon White.)

*Analysis:* Both climbers were competent, and Edwards in particular was experienced and strong. The excellent weather led them to try an ambitious climb, but the rope of two was too small to cope with any serious mishap. A rope with several climbers attached might have been able to stop the fall. Another rope of two could have assisted the injured and started the evacuation.

*Washington, Mount Baker.* On May 20th Stephen Esses (age 22) died of exposure after spending a stormy night in a rudimentary snow cave near the summit of Mt. Baker. Esses, a University of Washington student, was one of fifteen student climbers in an Intermediate Mountaineering course (Physical Education N52) offered by the Office of Non-Credit Programs in Continuing Education. The leader of the party was Warren Bleser (35), a mountaineer of twenty years' experience. His assistant was Erik Myklestad (22), a graduate of Bleser's High Angle Rock course who had been climbing for two years. The other fourteen student members of the party ranged in age from 16 to 40. Esses was a graduate of the Basic Mountain Climbing course (P.E. N51) and Winter Mountaineering (P.E. N54).

The party assembled at Kulshan Cabin on Friday night, the 18th, and left shortly after dawn on the 19th for the headwall of the Coleman Glacier. The weather was good and the previous day's forecast had not mentioned any approaching storm. At the base of the headwall the party formed a single seventeen-man rope with Bleser in the lead. Several members of the party had become tired on the ascent to the headwall, and Myklestad offered to return to the cabin with them. In addition, there were doubts about the changing weather conditions. But when word came down that the ice conditions were easier than expected, everyone decided to continue. During this stop several people noticed that Esses was wearing only blue jeans, a football jersey, and a windbreaker. Another student gave him a down jacket, and he was offered woolen underwear which he declined. The time interval between the departure of the first person (Bleser) and the last (Myklestad, the seventeenth) from the base of the headwall was three hours. Esses was thirteenth on the rope.

Bleser climbed rapidly, but delays developed below him. He sent a query down the line of climbers: "It is okay?" This message reached the end of the rope as "It is okay." As Bleser neared the top of the headwall (altitude about 10,400 feet) he sent down a message to divide the party by starting a parallel line of ascent. Esses became the last man on Myklestad's rope. The party was now divided into two groups: numbers 1-12 with Bleser leading, and 13-17 with Myklestad leading. Worsening weather made oral and visual communication increasingly difficult. An instruction came down and was misunderstood, causing No. 8 to untie from No. 7. Climber No. 6 then untied from No. 5. Thus there were four separate ropes: No. 1-5 with Bleser leading, No. 6 and 7 together, No. 8-12, and No. 13-17 with Myklestad leading. Bleser's rope continued to climb trailing an empty rope behind the fifth man; Bleser did not know that the party had been divided.

Bleser reached the summit plateau at about 6 p.m., leaving three and one-half hours of daylight — enough for his planned descent route. Shortly thereafter he realized that his party was moving too rapidly and discovered the empty rope behind his fifth man. Visibility was now reduced to as little as twenty feet. Bleser's group returned to what they believed to be the top of the headwall, but after a half-hour's search they found no trace of the other twelve and assumed that they had descended the headwall. Some members of the group were complaining of cold, so Bleser set off by compass on the pre-planned descent route. He missed a turn near the Black Buttes. The group went down an unfamiliar glacier and bivouacked for the night in a crevasse.

On the summit plateau Myklestad's group of five was united by chance with No. 6 and 7. The other party of five, No. 8-12, apparently passed within thirty feet without seeing them. One of the five students, Dr. Peter Winter, became the leader and, being familiar with the mountain, was able to take his group down by map and compass. Winter made the same directional error as Bleser, but his group was able to reach the trees before dark.

Myklestad's group of seven felt they could not descend by the headwall, and no one was familiar with the pre-planned descent route. They began to dig snow caves on the summit plateau. The caves were dug into a narrow seam surrounded by ice. The night was a desperate experience. Myklestad kept them awake with talking, singing, eating, and the constant search for a comfortable position, but individually their thoughts drifted toward despair. At dawn Myklestad got out and found the weather still severe. One couple decided their only chance for survival was to try to descend, and Myklestad felt that he could not stand in the way of such a personal decision. Esses elected to go with the couple and helped them leave the snow cave, but once outside he said he could not make it down. The couple started off, unroped, and Stephen Esses remained standing outside the snow cave. In the words of one of the climbers: "Fifteen or twenty minutes later I went outside to check out the weather. I found it extremely cold (including chill factor) and was dumbfounded to find Steve just standing there. He didn't want to get back into the cave but I forced him (verbally) to do so to get out of the wind. His speech was very slurred and his thinking processes pitifully slow. We tried to get him to eat something but he wouldn't and he shortly went to sleep or passed out, I'm not really sure which." The next hours were the worst, until at 11 a.m. the sun brightened the cave. Believing there was no further help they could give Esses, who had been unconscious, and convinced that their own hope for survival lay in taking advantage of the improved weather, the four left.

On Saturday night at Kulshan Cabin a group of climbers led by Ed Tieman, Mike Knowles, and Tom Minor realized that the University party might have met with difficulties. They started up the mountain early Sunday morning and met the six survivors of the summit bivouac. They reached the top at 6 p.m. and found Stephen Esses dead in the snow cave. His body was evacuated by helicopter on Monday. On Sunday Bleser's group of five and Peter Winter's group of five were reunited at the Middle Fork of the Nooksack River, and together they made their way to a road and back to the Kulshan Cabin. (Sources: Hal Foss, University of Washington.)

*Analysis:* The University's committee of inquiry concluded that no "member of the party, either among the students or the leaders, acted in an irresponsible manner." Further, "the first vital step in attempting to understand the interplay of the many facets of this tragedy was the disentanglement of the notions of *could* and *should*. The day's climb *could* have been aborted at the earliest sign of variable weather. Mr. Esses *could* have turned back because he was improperly clothed. Warren Bleser *could* have used a different roping system going up the headwall. Other members of the party showing signs of fatigue after crossing the Coleman Glacier *could* have turned back. However, given the purpose of the climb, the prior experience of the class members and the vast climbing experience of the instructor, one must also ask: *should* those steps have been taken? The answer to this question is speculative, for the outcome of such corrective actions is not predictable and does not become obvious until such time as they are realities in a drama triggered by the one factor beyond human control, namely the weather."

Like the accident on Humphrey's Peak in Arizona, this death raises the question of the exact responsibilities of the leader/instructor toward the party members, and those of the members toward the leader/instructor. The Arizona Mountain Club's answers to that question are more specific than the University of Washington's.

Club climbs and, more recently, school instructional groups, may take the form of large parties with a low ratio of experienced climbers to learners. A large party is not inherently unsafe, but it can become so when safety becomes synonymous with the ability to communicate effectively and move quickly. Bleser's party took three hours to pass a single point (the foot of the headwall). Dividing the party into smaller groups might have alleviated the problem, but in combination with zero visibility it actually compounded it.

A large party may also have a psychological character which is subtle but far-reaching in its effect. Except in a para-military environment, which is not common in American mountaineering, a large party tends to blur the individual's level of responsibility for himself. If Stephen Esses were still alive, perhaps he would take full blame for his inadequate clothing, but perhaps he would feel he deserved more explicit instructions from his school and teacher. Perhaps it was Myklestad's responsibility, as assistant leader, to familiarize himself with the planned descent route from the mountain, but perhaps it was Bleser's responsibility to ascertain whether he knew. In the end he did not know and his party had to spend the night on the summit. Even in a rope of two climbers, ambiguities of responsibility can and do arise; in large parties the hazard seems proportionally greater.

*Wyoming, Tetons.* On July 3rd Vladimir Farkas and Dean Smith (age 30) were descending the Grand Teton by the Owen-Spalding Route after a climb of the North Ridge. While holding a polypropylene handline Smith slipped on icy snow.