and Beal had "climbed quite a bit" and that Belinda and her son had joined them for

some easy scrambling to the top of the ridge.

In an interview at the hospital two days later, Dugan said he'd been climbing since he was 17 years old, first in the Catskills, later in the Adirondacks, and more recently in the Shenandoah National Park. (But he'd never heard of the Gunks, of known climbs in northern New York, and only recently had he heard of Seneca Rocks.) His preference in climbing rope runs to surplus military rappel (static) line and not much other gear, though he's been working on a combination seat harness/rucksack. He's a skydiver but said he can't see sense in spending money on climbing gear. (Source: Jim Underwood, Tactical Skills Team, Franklin, WV)

(Editor's Note: Unfortunately, this is one of those cases that can be picked up by the media, National Safety Council, federal and state agencies, etc., as an example of how dangerous the sport is—and how incompetent the participants are.)

FALL ON SNOW, OFF ROUTE, INEXPERIENCED Wyoming, Grand Teton National Park, Middle Teton

On May 30, 1992, a climber (20) and his partner were on the way down what they thought was the Southwest Couloir of the Middle Teton, at 1630 and fell about 800 feet down a steep snow slope and over two 40 to 50 foot cliff bands. Both are unclear if the two to four foot avalanche debris they were caught in was started by the fall or caused the fall. Arms was unconscious for about five minutes after the fall and had a fractured heel. Walter went to Garnet Meadows to get their tent and sleeping bags which he used to stabilize Arms before Arms was flown out by NPS helicopter at 0800 on May 31, and was taken to St. John's Hospital where he was treated for a fractured talus.

Analysis

The pillow of snow around Arms and the fact that he was wearing a helmet probably saved his life. He told ranger Springer he remembers hitting his head several times during the fall. The climbers' relative inexperience, lack of route finding skills, and soft snow conditions probably caused this accident. (Source: Scott Berkenfield, SAR Ranger, Grand Teton National Park)

LOSS OF CONTROL—VOLUNTARY GLISSADE

Wyoming, Grand Teton National Park, Owen Couloir

On June 9, 1992, H. Kammeyer (33) and his partner departed from a high camp at the Lower Saddle for an ascent of the complete Exum Ridge route on the Grand Teton. They completed the route, reaching the summit of the Grand around 1200. They then successfully descended to the Upper Saddle.

Both then started down the standard descent in the Owen Couloir below the Upper Saddle. Kammeyer elected to descend the snow in the couloir while his partner descended a rock rib. The snow near the top of the couloir was described by Kammeyer as being soft

and wet.

Kammeyer passed his partner in a sitting glissade. He watched as Kammeyer appeared to accelerate in his glissade about 50 yards below the Upper Saddle. He approached a cliff band in the couloir about 100 feet high and attempted to use his ice axe to self-arrest,

by putting the pick of his axe into the snow with only one hand gripping the shaft of the axe. The ice axe was ripped out of his hand and he cartwheeled several times before

falling over the lip of the cliff band and out of sight of his partner.

With no visual or voice contact with the victim, the partner continued down the standard descent. After 25 minutes, he saw Kammeyer lying motionless on the snow about 100 feet above the Black Dike. He had fallen down the mixed snow and rock for a vertical distance of about 800 feet. After another five minutes or so, the partner reached Kammeyer.

The partner reported that he initially examined the victim and found him to be confused, disoriented and did not know who his partner was. He appeared to have sustained two broken arms, a head injury and possible rib fractures. He was conscious, however, and was able to stand since he did not appear to have injured his legs. Remarkably, the partner was able to assist Kammeyer down to their camp at the Lower Saddle. Upon reaching camp, he put his partner in a sleeping bag in their tent and enlisted the help of other climbers at the Saddle.

The partner left the Lower Saddle at 1620 to descend Garnet Canyon and report the accident. At 1730, he met ranger Larson on the Garnet trail as Larson was descending from a mountain patrol of Irene's Arete. Larson reported the incident via radio. At 1732, I requested dispatch of the park contract helicopter. It landed at Lupine Meadows at 1824. The helicopter landed on the Lower Saddle and ranger personnel reached the victim at 1839.

Ranger personnel evaluated and stabilized Kammeyer with C-collar and backboard, assisted by a physician who happened to be in the area. They then initiated a carry of the patient from his camp to the helispot. At 1929, the helicopter, with the victim and Ranger Dorward on board, left the Saddle for a direct flight to St. John's Hospital in Jackson, arriving there at 1937.

Kammeyer was reported to have sustained: bilateral wrist fractures, a right side pneumothorax, and fractures of T-8, T-12 and C4-7.

Analysis

Kammeyer was wearing a climbing helmet at the time of his fall. The helmet was extensively damaged in the fall and quite probably saved his life or prevented an even worse head injury. The cause of the accident was an inability to self-arrest on snow due to improper technique. It was subsequently reported that prior to the accident, the wrist loop on the ice axe was broken. The partner indicated that earlier in the day Kammeyer had demonstrated proper self-arrest technique as they approached the climb. But at a critical moment when it most counted, he was unable to execute a self-arrest. (Source: Peter Armington, SAR Ranger, Grand Teton National Park)

PITON PULLED OUT, FALL ON ROCK, REMOVED PROTECTION Wyoming, Grand Teton National Park, Guides' Wall

On June 26, 1992, at 1145, Roland Fleck (59) was leading the "Flake Pitch" on the regular Guides' Wall route belayed by partner Wes Mostaert. This pitch is about 500 feet off the ground and is considered to be 5.7 in difficulty. After clipping into a fixed piton, Fleck apparently then reached down and removed two other pieces of protection that he himself had placed. He body weighted the piton, applying an outward force to it at which point it suddenly pulled out of the rock. He fell 40 to 50 feet down to the ledge at the base of the pitch and sustained multiple injuries upon impact. Mostaert