example, it's frequently observed that a skier other than the first is the one to trigger an avalanche. Also, it appears common that a hard stop or fall will trigger an avalanche that would not have occurred had the person continued to ski smoothly. (See 84-6.) The lessons of these observations are obvious: be wary even if you are not the first skier down, and don't fall.

Third, beacons are useless unless you know how to use them. This rescue succeeded because of good fortune, not good training.

Fourth, this accident occurred on the exact slope of a previous and very similar accident. On December 2, 1977, three skiers triggered an avalanche that buried two of them. Both were saved because of expert use of beacons. It is believed that this was the first live recovery, by beacon, of an avalanche victim in the United States. This accident is documented as 77-10 in a previous edition of *The Snowy Torrents*. (See accident 81-13 for another accident in the Day's Fork area.)

83-17 DECEMBER 10, 1983

Crystal Mountain, Washington

1 patroller caught, partly buried and injured

Weather Conditions

On December 8–9, light snow had fallen at Crystal Mountain with a total of 11 inches and 1.40 inches of water. The morning of Saturday, December 10, brought light snow again with 3 inches of heavy, new snow; it contained 0.79 inch of water. West winds that morning were averaging 35–40 mph.

Accident Summary

The Crystal Mountain ski patrol was running its normal avalanche control routes on Saturday morning. Little activity was anticipated, but there was some concern that the high-density snow of the last 3 days had accumulated on a firm crust. Faith Burchard, 26, had been on the patrol for 7 years and had been running control routes for 4 years. She and patroller Charley Barron were running the "00" route in Campbell Basin, which they started at 0900 from the top of the High Campbell Chair.

They had six hand charges between them. After they had thrown four (without any releases), they had run out of pull-wire ignitors because several of the ignitors had failed to work. They wanted to throw a charge into Chute 317, but now they could not. They decided to ski cut the next slope, Chute 318, which rarely slides. If it appeared stable, they would ski it and return later to control 317. Both patrollers made three Z-cuts in the top of Chute 318. The snow seemed stable, so as Barron watched, Burchard started to ski down. The time was 0930. She made several turns, and then the snow fractured around her and 50 feet above her.

Burchard relates what happened next: "After completing a turn to the left, I noticed the snow was moving around me. I went into a ski-pole self-arrest, but I couldn't slow myself or get an anchor due to too much snow moving. I was getting closer to the trees below me, so I turned and tried to ski with the snow. The snow immediately surrounded my skis and sucked them under. I released foreward out of my bindings and went under the snow. I had the same feeling as when I used to body-surf in the ocean. There was a definite undertow effect under the surface of the snow.

"I started to swim and came up on top to see trees slightly to my right. I went back under and glanced off a tree with my right leg. I knew instantly that I had broken my femur. I continued to swim down with the slide sideways. I ended up in the major deposition zone on top lying on my left side with my broken leg on top of my good leg."

Rescue

Barron was left standing just above the fracture line. He had lost sight of Burchard on her way down, but the two patrollers quickly made radio contact after the slide stopped. In addition Burchard made voice contact with another patroller nearby. She apprised them of her broken leg and called for a tobaggan and splint. Forty-five minutes later she was at the first-aid room, and was then flown to the hospital via helicopter.

Avalanche Data

The avalanche was an SS-AS-3 and fell about 300 vertical feet. The slope faces southeast, and