Ed Lachapelle

Snow scientist and author of 'The ABC of Avalanche Safety'

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Edward Randle LaChapelle, snow scientist: born Tacoma, Washington 31 May 1926; Professor of Geophysics, University of Washington 1973-74, Professor of Geophysics and Atmospheric Sciences 1974-82 (Emeritus); married (one son); died Monarch Mountain, Colorado 1 February 2007.

To witness at close quarters a big avalanche roaring down a mountainside and exploding across a glacier floor in a rolling cloud of powder snow that fills the air and scourcs one's face is to know the puniness of man. To be much nearer is likely to be a terminal experience.

Asked in a courtroom once if he was an "expert" on avalanches, the Swiss mountaineer and avalanche researcher André Roch replied: "No, but I've seen a lot." Ed LaChapelle, who had worked with Roch, was similarly dismissive of the tag, declaring: "I'm no expert - the experts are all dead."

Ed LaChapelle - skier, snow addict and mountaineer - is now dead too, though not as the victim of an avalanche. Aged 80, he died of a heart attack while skiing in knee-high powder snow with his partner Meg Hunt and friends at Monarch Mountain in Colorado.

LaChapelle is best known to ski-tourers and others who go about the mountains in winter as the author of The ABC of Avalanche Safety, a pocket-sized guide on how to avoid avalanches and how to react if you or a companion get caught in one. The little book first appeared in 1961 and over the years its practical advice must have saved many lives.

The same principle of trying to help outdoor professionals and back-country skiers interpret snow accumulations and what might be happening to erode the stability of a given snow slope - i.e. whether it might slide away or not - also underlay LaChapelle's highly regarded Field Guide to Snow Crystals (1969) with its excellent black-and-white photographs of the various and often beautiful forms that snowflakes can take.

Raised in Tacoma in Washington state, with the peaks of the Cascades range on his doorstep, LaChapelle apparently decided to make snowy mountains his life's work in a single moment as a teenager - inspired by the sight of the evening sunlight on Mount Rainier while he was working as a bellhop at the nearby Paradise Hotel. After two years in the US Navy he entered the University of Puget Sound, graduating in 1949 in physics and mathematics. While a student he had also learnt to ski and made climbing trips to the Canadian Rockies.

LaChapelle's career as snow scientist took off with a stint as a guest worker at the Swiss Federal Institute for Snow and Avalanche Research above Davos in the winter of 1950-51. This was André Roch's domain, though LaChapelle had already heard him lecture in Seattle in the late 1940s. Roch had introduced the North Americans to a scientific approach to avalanche studies and this was the path that, with plenty of practical application, LaChapelle was to follow.
Another early influence was Monty Atwater, a veteran of the 10th Mountain Division, who had laid the basis for avalanche forecasting and control in the United States while a snow ranger for the Forest Service at Alta, Utah. LaChapelle joined Atwater in 1952 at the start of an era of rapid development in the agency's understanding of avalanches and techniques of control - knowledge that it used in the selection and design of ski areas nationwide.

LaChapelle looked back on this productive period of his life in the foreword to the latest edition of The Avalanche Handbook, describing the 1950s as "the Golden Age of Forest Service avalanche studies". In various guises, the hefty handbook has been a bible on avalanches and snow safety for half a century, with LaChapelle authoring the 1961 update when Atwater left to apply Alta's expertise in Squaw Valley for the 1960 Winter Olympics. LaChapelle in turn went to Japan in support of the Sapporo games.

LaChapelle's work varied according to the seasons. In winter, until the early 1970s, he worked for the Forest Service at Alta, becoming head of the Avalanche Centre, and in the summer he did glacier research in places such as Greenland and Alaska. In 1968, he was appointed to the faculty of the University of Washington, retiring in 1982 as Professor Emeritus of Geophysics and Atmospheric Sciences, and between 1973 and 1977 he was also involved in avalanche studies at the Institute for Arctic and Alpine Research of the University of Colorado at Boulder, spending winters at Silverton in the San Juan mountains.

The Alta rangers were known as the "Avalanche Hunters" and in the early days when war-surplus explosives were readily available - "You could just take a government pick-up out and fill it up," LaChapelle recalled - field experiments to trigger avalanches and make pistes safe could be quite exciting. That same enthusiasm for experiments and an inquisitive mind also put LaChapelle at the birth of avalanche transceivers, now regarded as an absolutely essential piece of kit for all ski-mountaineers and tourers. The size of a small mobile phone, the device transmits a radio signal in case of burial under snow and can be switched to "locate" if others are buried. In 1968 LaChapelle built a tiny transmitter and then worked with the electrical engineer John Lawton, who went on to develop a useable transceiver.

LaChapelle's practical bent continued to be an asset when, on retirement, he and Meg Hunt, his partner for 25 years, moved to the remote settlement of McCarthy at the foot of the Wrangell mountains in Alaska. Living "off the grid" - that is, without mains electricity - in a one-room log cabin, they used solar energy about the home and to power an electric car and electric bike.

Ed LaChapelle's death came just a week after that of his former wife Dolores, a powder skier who had pioneered new routes and ski techniques in Utah at the time her husband was working at Alta.

"Beware of snow that 'talks' to you!" was a memorable piece of advice from LaChapelle's ABC. He meant the tell-tale "whumph" sound when an area of snow settles beneath your skis, betraying the fact that somewhere below the surface lies a weak and slippery layer and your weight may be all that is needed to set the whole slope in catastrophic motion.

For that one piece of wisdom alone there will be skiers who owe a debt of gratitude to Ed LaChapelle - myself included.

Stephen Goodwin

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