

REVIEW

C. FRASER. *The avalanche enigma*. London, John Murray, [1966]. xvi, 301 p., illus. 42s. (Published in U.S.A. by Rand McNally and Co., New York. \$5.95.)

GOOD books on the subject of snow avalanches are scarce indeed. That this one is excellent makes it especially welcome. Let it be said at the start that this is not a complete text on the subject (no one book is likely to be). The serious student seeking a thorough technical treatment will be disappointed, for this book is addressed to the layman. But everyone interested in snow avalanches, from the dedicated scientist to the casual week-end skier, stands very much in debt to Mr. Fraser. He has collected histories, anecdotes, stories of hair-raising survivals, details of rescue work, methods of avalanche forecasting and control, and an outline of modern research methods; and he has combined these into a thoroughly readable book. The extent of research and the wealth of detail compel admiration. (How many avalanche authorities knew that the first fatal avalanche accident involving recreational skiers befell two Swiss alpinists named Ehlert and Mönlich on 2 January 1899?) The author set out on his task with the assets of skiing ability, a knowledge of languages and determination. This determination earned him the rare distinction of a position as patrolman with the famous Parsenn rescue service in Switzerland. When he writes of avalanches, he speaks with the authority of personal experience.

We are in debt to Mr. Fraser especially for two reasons. For one, he has published widely for the first time a thorough account of the history, organization and methods of the Davos Parsennendienst, the world's first professional ski patrol and one of its finest. The men of the Parsennendienst have long been noted both for their professional competence and their taciturnity. Fraser takes them to task for their weakness of poor public relations, then goes a long way in this book toward remedying it. Ski patrolmen everywhere, volunteer and professional, will welcome this report on their famous but reticent peers. The author goes on to explain in detail the rescue methods, avalanche dog system, research organization and avalanche control measures in Switzerland. Though Mr. Fraser ranges as far afield as British Columbia and Peru for examples of avalanche disasters, this is, in fact, a book about Swiss avalanches which brings together diverse and often obscure information, just the sort of compilation we have long awaited from the Swiss themselves.

The second reason is that he has collected under one cover a remarkable assembly of avalanche information and history hitherto unavailable in English. Many of these accounts have been gathered from official files, unusual sources and personal interviews. Some have never before been published. If it were not for Mr. Fraser's perseverance and persuasive personality, the details of Gerhard Freissegger's fantastic survival for 12½ days under avalanche snow, for instance, might never have been seen in print. Mr. Fraser induced him to talk. Such case histories of accidents, rescues, and hard-earned experience in avalanche protection and control will make this book a valuable reference for training and instruction.

The author treads less surely when he embarks on the chapters concerning technical details of snow behaviour and avalanche formation. For this part, he acknowledges leaning heavily on the able guidance of the well-known Swiss authority, André Roch. The technical treatment therefore is sound; the student of avalanches can confidently rely on Mr. Fraser to guide his footsteps. In fact, a more up-to-date introduction is not available today. But the advanced student will find the treatment of snow mechanics and physics uneven, while the expert will be uneasy about the over-simplification of several highly complex problems, such as the effect of air temperature changes on snow stability.

Of those who read *The avalanche enigma*, few will ever again venture out onto a steep, snow-clad slope without pausing to consider the consequences. It will be a long time before a more persuasive brief for snow and ski safety will be published. We hope that German and

French editions will appear soon. To judge from the author's tales, as well as the number of avalanche fatalities in the Alps each winter, this book could be widely read in Europe to good advantage. Some of Mr. Fraser's readers may think his exhortation to obey avalanche warning signs too imperative, his parade of examples from disregarded warnings too dismal. This reviewer can report from parallel experience on another continent that the skiing public needs still more vigorous exhortations, thoroughly illuminated by dismal examples. The greatest cause of avalanche accidents is heedless ignorance. Not everyone can be an expert, but they can read *The avalanche enigma* and profit from the experience of those who are.

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