

valuable and important book. The authors are experts in both theory and practice and have been active in search and rescue activities on mountains and in the Arctic, as well as management of badly injured patients in hospitals. Written in language easily understood by the nondoctor, this is an excellent update on what we know (and don't know) about cold injury today. This book is strongly recommended for anyone expecting to be out in the cold, at high altitude or low down, or on the water.

CHARLES S. HOUSTON, M.D.

Medicine For The Outdoors; A Guide to Emergency Medical Procedures and First Aid. Paul S. Auerbach. Little Brown, Boston, 1986. 345 pages, profusely illustrated with line drawings; glossary, bibliography. \$12.95 (paper).

This is a first-class paperback, an easy-to-carry handbook for the lay person, describing the signs, symptoms, cause, treatment and prevention of just about everything you might encounter away from (or even in) your backyard. Written in nontechnical language, with excellent illustrations, it's the simplified version of the comprehensive *Management of Wilderness and Outdoor Emergencies*, edited by Auerbach and Geehr in 1983 and designed for health professionals. An appendix on commonly used drugs, giving indications, dosage, and side effects and an excellent glossary defining medical terms add to the value of a brief chapter on ideal first aid kits. Problems encountered in scuba diving, climbing, eating wild plants, or being struck by lightning, bitten by snakes or spiders are well but simply discussed. This is an ideal companion on any trip of more than a few days—and good medical education for a lazy day in the sack.

CHARLES S. HOUSTON, M.D.

Avalanche Safety for Skiers & Climbers. Tony Daffern. Rocky Mountain Books, Calgary, 1983. 172 pages, black and white photographs, diagrams, glossary, bibliography. \$11.50 (Canada).

Daffern directs this book to the mountaineer or back-country skier facing various types of avalanche hazards along the way. Using well-chosen case histories of mountaineering and wilderness skiing accidents, Daffern discusses the risks—including implications of decision-making—without resorting to sensationalism or preaching.

Daffern has gathered his snow studies and resource material from several respected sources and the technical sections are generally very good and up to date. However, I found a few of his drawings a little obscure, particularly the one describing heat gain/heat loss in the snowpack on pages 39 and 40. On the plus side, the section on field snow observations is the most complete of any current avalanche handbook. It includes many casual observations that can be made, while on skis, in addition to the more formal tests and snow structure studies.

Daffern does not fail to mention the particular uniqueness and subtleness of those delayed-action avalanches—those involving deep snow layers and those which occur after a storm or period of recent loading, perhaps several days later, and often in conditions of clear, calm weather. The problem with this type of avalanche is down-played in most other publications, yet this is the avalanche which results in the majority of skier avalanche deaths. A particularly telling photograph on page 141 is a good reminder.

There are the usual, but well-done chapters on route-finding and rescue. Of particular note is a discussion on what helicopters can and cannot do in the mountains, acknowledging that the helicopter is part of the mountain scene in many areas today.

An interesting and generous selection of photographs carries the information well. Many of the photographs are of climbing situations, as well as skiing. Of special note are the state-of-the-art snow crystal photographs by Ronald Perla.

In summary, *Avalanche Safety for Skiers & Climbers* is an excellent field-level avalanche handbook. For mountaineers, it is the best available.

PETER LEV

The Avalanche Book. Betsy Armstrong and Knox Williams. Fulcrum, Golden, Colorado, 1986. 212 pages, appendices, bibliography. \$14.95.

Anyone whose encounters with snow tend toward the nonhorizontal should have a working understanding of avalanches. Until recently, this has been difficult to acquire due to a paucity of nontechnical information on the subject. In the last few years, however, an "avalanche renaissance" of sorts has produced several good books for the general reader, of which *The Avalanche Book* is the most recent and the most comprehensive. If there were an avalanche category of Trivial Pursuit, this book would have all the answers. What should you do at the moment of being buried by an avalanche? (Shout once to alert rescuers, then close your mouth to prevent it from being packed with snow.) How many buried victims have been recovered alive by avalanche dogs? (One.) What are the legal liabilities of a real estate developer who sites a house in an avalanche path? (Depends on whether you live in Colorado or Alaska.) But avalanches are anything but trivial, as this book's harrowing case histories and chilling statistics well attest.

Within the tightly-knit world of avalanche professionals, *The Avalanche Book* has generated a certain amount of controversy. Some feel that Armstrong and Williams give undue credit and attention to academically oriented researchers, while downplaying the contributions of the practical field workers who spend their days skiing over avalanche terrain with backpacks full of dynamite. Both authors are prominent researchers, and their emphasis, while galling to those they somewhat condescendingly refer to as "practitioners," in no way lessens the usefulness of their book for the general reader. Practical aspects of avalanche safety, avoidance, and rescue are covered in a clear and thorough