maker. Anyone who carries a camera in the mountains, whether still or movie, will profit from the tips to be gleaned from its pages. The ascents themselves, household names in the main, are different when viewed by Dickinson's perceptive eye behind the lens.

BOB GODFREY

Man at High Altitude. Donald Heath and David Reid Williams. Churchill Livingstone, New York and London, Second edition, 1981. 347 pages, many illustrations. $65.

High Altitude Physiology. Edited by John B. West. Hutchinson Ross, Pennsylvania, 1982. 462 pages. $55.

High Altitude Physiology and Medicine. Edited by Walter Brendel and Roman A. Zink. Springer Verlag, New York and Berlin, 1982. 316 pages. $65.

Hypoxia; Man at High Altitude. Edited by John Sutton, Norman Jones, and Charles Houston. Thieme-Stratton, New York, 1982. 210 pages. Many illustrations. $35.

Oxygen Transport to Human Tissues. Edited by Jack A. Loeppky and Marvin L. Riedesel. Elzevier Medical, New York, 1982. 374 pages. Illustrations. $45.

In the last two years more books have been written about high altitude and our accomodation to lack of oxygen than in the last quarter century. And a good thing too, what with the great increase in high-altitude mountaineering and accompanying increase in death and disability from avoidable, preventable illnesses. Climbers by nature are risk-takers perhaps, but there are risks and risks, and some may be taken to test oneself, but others seem a futile, foolish macho exercise. There's a middle ground—testing our physiological limits. How high, how fast can the human climb? How much cold, wind, privation can one endure? These are legitimate expansions of human capability—much like running an ever-faster marathon, or rowing alone around the world. We have to admire, even applaud such efforts, always bearing in mind Mallory's question about climbing: "Whom have we conquered? None but ourselves."

At any rate, he who wishes to challenge the effects of high altitude should understand the risks and these books will help, although unfortunately these particular ones, the best and most up-to-date, are written in medi-speak and much of their contents hard for the nonprofessional to grasp.

Man at High Altitude is a second, extensively revised edition of a major book, probably the single most authoritative book on high altitude today. It is well written and put together, extensively illustrated with photographs, charts, and diagrams which for the most part are easy to understand. It covers the entire field of high-altitude lack of oxygen thoroughly as the title promises, but does not deal with cold, heat, cosmic radiation, or illness and trauma. If one wishes

a single volume about lack of oxygen at altitude, this is the one, even though the price is almost double that of the 1979 first edition. It has two shortcomings, unfortunately. First, the extensive bibliography contains no references later than 1979, which means that the information in these articles dates back to 1978 because of the long lag between submission and publication. With knowledge advancing so precipitately, this is a serious flaw. Secondly, the authors being pathologists, it is understandable that their emphasis should be on that discipline, and the book is weak, and in places wrong, about clinical aspects. (One small but important example is their statement that climbers who have had retinal hemorrhages should be advised not to go above 10,000 feet again! Such a patently unjustified statement might encourage destructive litigation and absurd bureaucratic regulation.) Thirdly, their discussion of safe rates of ascent has been out-dated by the demonstration by many world-class climbers that ascending 1000 feet a day is too fast for some but much too slow for others. But these are trivial faults in a first-class book. If you want an encyclopedic medically oriented text about altitude, get this one.

High Altitude Physiology. Coleridge wrote "the lessons of the past illuminate the future" and the more one studies, the more one comes to respect the successes or failures of our predecessors. West's book (one of the Benchmark collection) is an indispensable reference for anyone curious about how we got where we are today in our knowledge of altitude physiology. He has managed to collect—and even better to edit skillfully—the most valuable materials of the last several centuries, and it is exciting to read, in their own words, what our brilliant forerunners wrote. One misses some: for example excerpts of Hurtado's 1937 paper might have been translated and included to enlighten the many who quote without having read him, and Longstaff's privately printed thesis, one of the first comprehensive treatments of altitude illness would be a valuable addition. But every one would have a different list, and West has made a splendid selection. If you wish to know some of the classics in this field, there is no better—in fact no other single source.

High Altitude Physiology and Medicine is a collection of forty-nine papers presented at a symposium on high altitude held in Germany in 1980 and sponsored by the Volkswagen Foundation. The majority of the articles are by Europeans, with significant contributions from South America and Asia. Although most are written in medical terms, primarily for health professionals, sixteen sections relate directly to mountaineering and illnesses attributable to high altitude. Not surprisingly some of the statements are at variance with what we accept as gospel in this country—and such variants are stimulating and welcome. Many of the papers have been given elsewhere, but as a collection this is a refreshing and valuable book.

Hypoxia; Man at Altitude, like the preceding book, is a collection of papers given at the Second Hypoxia Symposium in Banff in 1981 and also contains many papers directly related to high-altitude mountaineering. Unlike the others, discussion follows each paper, which gives additional insight. Especially interesting are the case reports, recounted by victims of high-altitude

edema, sickle cell crisis, thrombo-embolism and in the words of non-medical people these stories are impressive. Since the Symposium was planned to be comprehensive, the coverage is broader and a reader will get a more complete, less fragmented picture of what hypoxia does or can do to the human body and how to ward off the effects. This book is probably of more interest to the non-doctor climber than most of the others reviewed here.

Oxygen Transport to Human Tissues is another collection of papers given at a symposium. This one was held in Albuquerque in the spring of 1981 in honor of Dr. Ulrich Luft, a distinguished leader in high-altitude medicine. Virtually all the leaders in altitude research participated and their papers record the cutting edge of research at the time. Not surprisingly they are sophisticated and complex and few have any direct bearing on mountaineering. A number of speakers from abroad gave the symposium and this book an international flavor, and most of the material is new, prepared especially for this meeting. For the non-scientific climber this book is a bit much, but for a physiologist or physician interested in the latest advances, the book is a must.

CHARLES S. HOUSTON, M.D.

Ascent. The Spiritual and Physical Quest of Willi Unsoeld, by Laurence Leamer. New York: Simon and Schuster, 1982. 392 pages, eight plates of black-and-white photographs, and N.G.S. pictorial drawing of Mount Everest. $17.50.

This biography of a great mountaineer of outstanding character is a shallow book written by a man who shows no understanding of the sport of mountaineering or the joy of climbing; or in my opinion of the man he writes about, for I knew Willi Unsoeld well. To Leamer, Unsoeld is a man obsessed with risk, who drives himself, his daughter and others to danger and death. Perhaps this approach sells books or movie rights, but it does not do justice to a man of extraordinary humanity and unselfishness who set high standards for himself and always had time to help others with their problems. Yes, Willi believed in risk as a confidence-and-character builder, so long as the risk was justifiable and the risk-taker was aware of the consequences of failure. Joining the Peace Corps is a risk. Marriage is a risk—but who wants to live in a risk-free world?

This book leaves a bad taste in the mouth, for it contorts an outgoing, outspoken, generous man into an egoist with a sick mind whose thoughts focus only on Everest and a death-wish so strong that he doesn't care who dies with him. In similar manner, Unsoeld's devotion to his close-knit family is questioned and his home life is treated with smug contempt. The well known stories of Willi's climbs are the best part of the book. They shadow closely the original published versions familiar to climbers, but the often lengthy imaginary dialogues in the book are "based on recollections" only, yet read as if they were fact. Also some statements obviously made in jest are misinterpreted. Igno-