of a single animal. Many of the mechanical adaptations are shown to be subtle and to involve different kinds of molecular linkages, and these may be seen to change between similar species or conspecific populations. Here as in many other sections one encounters questions on multiple levels and suggestions for research. A feature that should have a particularly stimulating effect on subsequent work is the several sets of design principles and limiting conditions proposed. It is to be hoped that such semitheoretical predictions with their many components will reduce the frequency with which one sees adaptation explained in terms of single factors.

The writing is generally clear; assumptions and conclusions are set out in numerical sequence so that comparisons are facilitated. Only a few mathematical derivations are given, but some knowledge of calculus may be helpful. The book is illustrated with simple and uniform line drawings; there are neither photographs nor micrographs. The text is printed with an unjustified right margin. There is a list of symbols used, and the reference list conveniently indicates the place where each work is cited.

One hopes that the ready availability of this material will lead to its increased utilization and to more truly comparative studies of the way the structure of organisms adapts them to their environment.

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ESSENTIALS OF BACTERIAL AND VIRAL GENETICS by David M. Carlberg, California State Univ., Long Beach. Beginning with the fundamentals of modern genetics, this volume progresses through the chemical and biological nature of molecules responsible for the storage and transfer of hereditary information, the genetic code and mutations. Points of emphasis include spontaneous and induced mutations and bacterial mutants. Discussions of recombination are followed by coverage of transformation and conjugation in bacteria. The final two chapters cover genetics of the viruses encompassing the viruses of the bacteria, the eucaryotic microorganisms, and the higher plants and animals. '76, 336 pp., 166 il., 35 tables, \$24.75

EPIDEMIOLOGY FOR THE **HEALTH SCIENCES: A Primer on** Epidemiologic Concepts and Their Uses (2nd Ptg.) by Donald F. Austin and S. Benson Werner, both of the Univ. of California, Berkeley. Students in all the health sciences are provided with an easy and rapid understanding of epidemiologic concepts not possible with standard textbooks. Selected topics include distinctions between incidence and prevalence; determination of risk factors such as age or sex; distinctions between associated and causal relationships of risk factors to disease; and the uses of epidemic curves, graphs and other pictorial representations in demonstrating disease patterns. '76, 84 pp., 10 il., 3 tables, cloth \$6.75, paper \$3.95

MAN IN THE COLD by Jacques Le-Blanc, Laval Univ., Quebec, Canada. Foreword by Charles G. Wilber. Relating results obtained from laboratory animals to data accumulated on various human populations, this book discusses general responses to cold and the metabolic effects of cold. The author also reviews the nervous and endocrine control of substrate utilization at low temperature, studies food consumption of persons living in northern countries, and discusses cardiovascular responses to cold and various types of adaptation with specific characteristics. '75, 208 pp., 129 il., 6 tables, \$15.50

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