

"Research progress for the first time holds the prospect of medical management of the disease. . . . Unfortunately, lack of information prevents a significant proportion of black sufferers from seeking a therapy that is available now."

The timeliness and importance of this little book is implicit in that quotation. Reports and comment in medical journals do not often reach the people to whom they could mean the most. The physical, psychologic, and sociologic impact of sickle cell anemia on stricken families has only just begun to get the attention it deserves, both from the medical profession and the general public.

The frequency of the disease among blacks in America is about 8-12%. In Africa the incidence is generally higher, but the distribution is less uniform. The sickling of the red blood cells is caused by an abnormal gene affecting the hemoglobin; a single amino acid (glutamic acid) is replaced by valine. The consequence of this hereditary mixup is a tragedy of the first order, affecting generation upon generation of unlucky and often unsuspecting blacks.

This little book provides both a simple explanation of the disease and the answers to preventing the affliction and aiding the afflicted. Every classroom teacher, every social worker,

every black family, and every concerned citizen should help to spread its message.

Thomas J. Cleaver
Governors State University
Park Forest South, Ill.

Physiology & Aging

DEVELOPMENTAL PHYSIOLOGY AND AGING, ed. by P. S. Timiras. 1972. Macmillan Co., New York. 692 p. \$19.95.

This is probably the most comprehensive book ever published on the physiologic changes that occur over the human life-span. The text has two parts: events from fertilization to adulthood and events from adulthood through senescence. The literature survey is tremendous: more than 2,500 pertinent references on more than 1,200 subjects.

The book should help the physician to evaluate and treat chronic degenerative human conditions, and the scientist is offered a broad point of view on research. All the contributors wrestle with the physiologic events that herald the beginning of old age at the molecular, cellular, and organismic levels. The findings imply that death rarely comes simply from "old age"; rather, it may be the price we pay for our complexity.

Robert H. Davis
Hahnemann Medical College
Philadelphia

Textbooks

ELEMENTARY QUANTITATIVE BIOLOGY, by Carl Schlee Hammen. 1972. John Wiley & Sons, Inc., New York. 134 p. \$3.95 (softback).

Hammen says this little book is intended either as a textbook for an innovative general-biology course or as a supplement to a more traditional course and textbook. The problems are elementary, and they require for their solution only a knowledge of algebra, logarithms, and the slide rule. Calculus is used to explain some of the problems, but the formulas derived are algebraic. The particular topics of the book are ratio of surface area to volume; genetics and probability; exponential growth patterns; and osmotic relationships. Six general topics are discussed. The appendices are a periodic chart of the elements, common and natural log tables, tables of the chi-square test and t-test of probability, and answers to the problems.

It is difficult to believe *Elementary Quantitative Biology* could serve as the sole textbook for a course—especially a general-biology course, which often draws the nonmajor and the student who has little or no training in science or math. The book uses logs and the slide rule but neglects to explain to

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