out of print and difficult to find, covered the genera and species described through 1889, but the lack of complete coverage of the literature published after 1890 remained a serious handicap for workers in the field. Students of Foraminifera now owe a debt of gratitude to Thalmann for continuing the earlier work of Sherborn and completing an index of genera and species for the 60-year period 1890 through 1950 and to the George Vanderbilt Foundation (Stanford University) for undertaking publication of the important volume. The index is published in an attractive, well-printed, double-column, quarto volume. The following data are given for generic names: reference, type species, family assignment, and geologic age; for species: reference, geologic age, and area from which described. The generic and specific names are printed in boldface type. Some references for years prior to 1890 are given when they were not included in the Sherborn index.

Complete coverage of the well-scattered literature on Foraminifera published through 1950 is now available.

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Selected Overview

Recent Advances in Human Genetics. L. S. Penrose, Ed. Little, Brown, Boston, Mass., 1961. 194 pp. Illus. + plates. $8.

In a field developing as rapidly as human genetics, it would be impossible to handle all recent advances adequately in one volume. As an alternative, Penrose has chosen to select eight specific areas for careful treatment. His choice is excellent, and the style of writing is surprisingly uniform for a book with several contributors. The volume as a whole can be described as illustrative and concise, rather than as exhaustive and detailed.

Each chapter presents an overview of a specific problem, with comments about its historical development and the proper use of relevant terms. Significant principles are stated clearly and illustrated well. Some of the most recent findings are summarized, and the nature of current research problems is indicated.

Readers interested in clinical implications of genetics will appreciate Harnden's discussion of techniques and results in chromosome studies and the review of normal and abnormal sex differentiation by Miller. Penrose points out that birth weight can be studied profitably from the statistical and genetical points of view, and he also reviews the interaction of genetic and environmental factors in congenital malformations. Topics in human biochemical genetics are deliberately omitted in view of their adequate treatment elsewhere.

Statistical methods and theory are discussed by Smith, with an emphasis on procedures for analyzing genetic ratios, gene frequencies, and segregation ratios. Renwick presents a very clear review of methods and results in the study of linkage. At present only three autosomal linkages can be accepted with confidence, and only color-blindness loci are generally useful as sex-linked markers. Penrose outlines assumptions and procedures used in estimating mutation rates and stresses sources of bias which can lead to exaggerated values. Analysis of fingerprint patterns (discussed by Holt) reveals the strong effect of heredity upon pattern size and provides an interesting model for the study of quantitative traits in man.

Gerald's survey of abnormal hemoglobins has clinical implications, but it also highlights some insights and puzzles concerning the genetic determination of complex protein structure. Both qualitative and quantitative alterations in hemoglobin synthesis are described, and genetic interrelationships among the variants are interpreted. Other implications for understanding gene structure and action are included in the chapters on mutation, chromosomes, and linkage.

This book should appeal to a wide variety of readers. Interested laymen and scientists in fields other than genetics will find it a readable and authoritative starting point for understanding the topics discussed. Graduate and medical students and physicians will profit from the clear statement of basic principles and assumptions, as well as from the review of current techniques. For those who wish further details, there is a list of over 500 references (about half are later than 1955).

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On Science and the Scientist

Atoms and Men. Louis Leprince-Ringuet. University of Chicago Press, Chicago, Ill., 1961. 118 pp. $3.

The title page describes this book as a "translation," but it nowhere appears whether this is a translation of a book originally published in France, or whether we have here a translation made directly from an original French manuscript.

The author is director of the laboratory at the École des Hautes Études and is an atomic energy commissioner of France. The book is primarily addressed to the Frenchman who has suddenly become aware (and who is disturbed by all the implications of this awareness) that an absolute condition for the greatness or even the survival of a modern nation is that the nation take its place among the nuclear powers. One section is entitled "Can France Stage a Comeback?" The Frenchman has to take account of two different sorts of things, if he is to understand the implications of becoming a nuclear power. He must understand, as far as possible, the factual scientific background, and he must also understand what manner of man the scientist is to whom the destinies of his country will have to be increasingly entrusted. The author tries to accomplish both these ends by a popular, almost chatty, method of approach. It is somewhat surprising that nowhere in the book is there any explicit mention of the recent French decision to construct their own atomic bomb.

The translation reads smoothly enough, but one cannot help questioning the technical competence of the translator, when confronted with a passage like this (page 103): "It [uranium] is extremely *thick*." The context does not indicate whether "thick" means density or atomic weight. One's confidence in the technical competence of the author himself is somewhat shaken when confronted by: "We know, of course, that one can ascertain the mass of a marble or projectile by throwing it at a certain speed and then spotting the place where it falls" (page 6). And one does not know whether to question the technical competence of the author or of the translator when confronted by: "The piles of projectiles for an accelerator called a bevatron were ready" (page 24). One can only wonder to