

Book Reviews

Evolution and the Genetics of Populations. Volume 1 - Genetic and Biometric Foundations

By Sewall Wright. The University of Chicago Press - Chicago and London 1968. Bound volume with cover; 15 × 23 cm; x+469 pages including numerous tables and illustrations. Author and Subject Index. Price US \$ 15.00.

Four grand phases may be considered within the process of evolution: (1) the origin of life, (2) the origin of cells with perfected mechanisms, (3) the transformation and splitting of species, and (4) the origin of new genera and higher categories. Professor Wright's treatise in three volumes is centered on population genetics, and therefore mainly deals with the third grand phase of evolution, rather than evolution as a whole.

Before actually going into mathematical theory, Volume 1, *Genetic and Biometric Foundations*, considers its postulates, and reviews genetic principles with special respect to the most generally important genetic processes. After an introductory, historical account of evolutionary ideas up to the rediscovery of Mendel's Laws in 1900, basic problems are in fact dealt with, such as the modes of inheritance, reproductive cycles, the nature of the gene, nongenetic heredity, and the relations between gene and character at the various levels (metabolic and developmental processes, theory of dominance, gene interaction, etc.). The following chapters deal with statistical methods for the study of biological variability: frequency distributions, variables, deviations from normalcy, tests of significance. Special attention is devoted to path analysis.

Volumes 2 and 3 will deal with the theory of gene frequencies, and the experimental and natural populations.

The results and the synthesis of almost 60 years of study and experience of one of the founders of population genetics, are condensed in this work which should hold a central place in the library of any biologist.

Vererbung «Erworbener Eigenschaften» und Auslese

(Inheritance of «Acquired Characters» and Selection)

By Walter Zimmermann (Tübingen). Gustav Fischer Verlag - Stuttgart 1969. Second edition, revised. Bound volume with cover; 16 × 23 cm; xii+248 pages; 78 illustrations. Glossary and Subject Index. Price DM 55.00 (approx. US \$ 15.50).

When it first appeared, some forty years ago, this book was segregated in the Libraries of the Third Reich and could not be exhibited in public libraries. As a matter of fact, scientific problems such as the ones here examined have more than once suffered political intrusions: at least twice in the past few decades, with *Rassenhygiene* being imposed to German scientists and people, and *Lysenkoism* to Soviet ones, with the result of a moral, economic, and scientific disaster.

Actually, many difficulties arise when dealing with such a subject as the «inheritance of acquired characters», on account of hopefully no more political, but social, moral, and formal and scientific reasons. The main difficulties, however, seem to arise from the very nature of the formulation of the problem. What do we actually mean by «inheritance of acquired characters»? What is «inherited» and what is «acquired»? And, not less important, what is a «character»?

Hence the fundamental importance of clearly defining the nature of the problem and the methodological approach, and to examine the facts, before assessing the limits of our present knowledge.

Accordingly, the book is subdivided into three parts. The first, introductory part deals with the historical background of the problem, its methods of study, and its concepts. The second part, the real core of the book, consists in the formulation, definition and treatment of the four main questions underlying a possible «inheritance of acquired characters», i. e.: (1)

are hereditary factors subject to alterations, and may they be transmitted to offspring in the altered condition; (2) what degree of randomness may be shown to underly evolution and the alterations of hereditary factors; (3) are the acquired or the altered hereditary traits "useful" or "fit" to the organism concerned; (4) the existence of a regulating factor (mutation and selection).

The third, final part draws practical conclusions.

This book represents a serious and strict, methodical approach to a very delicate subject.

Rheumatology - An Annual Review, Vol. 2: Population Studies and Genetics

Edited by J. Rotstein (New York), S. Karger - Basel 1969. Bound volume with cover; 18 × 24 cm; vi+132 pages; 15 illustrations; 45 tables; Subject Index. Price Frs. 35.00 (US \$ 8.40).

A collection of four extensive surveys: (1) The epidemiology and genetics of rheumatoid arthritis (by J. S. Lawrence, Manchester); (2) Familial aggregation and twin studies in Still's disease (by B.M. Ansell et al, Taplow, Maidenhead); (3) Genetic polymorphism of human gammaglobulins (by E. G. Franklin and H. H. Fudenberg, New York); and (4) Blood groups and their secretion in rheumatic fever (by L. E. Glynn and E. J. Holborow, Taplow, Maidenhead).

An authoritative summarization of genetic and population aspects of rheumatic disease, including a new biochemical approach on its relations to blood groups, this book represents a source of extensive information and reference for further work.

Ergebnisse der Bluttransfusionsforschung - Volume X. (Results of Research on Blood Transfusion - Volume X.

Proceedings of the 13. *Tagung der Deutschen Gesellschaft für Bluttransfusion* held in Graz on May 15-18, 1968. Edited by L.P. Holländer and M. Matthes (Basel and Freiburg). Bibliotheca Haematologica, No. 32. S. Karger - Basel, New York 1969. Bound volume with cover; 18 × 24 cm; VIII+348 pages with numerous tables and illustrations. Price Frs. 79.00 (US \$ 19.00).

This book of proceedings of the 13th Meeting of the German Society for Blood Transfusion is divided into the following sections: (1) Polymorphism of plasma-proteins (genetic regulation of the biosynthesis of proteins; antigenic structure of human immunoglobulins, of lipoproteins; polymorphism of Gc-proteins, of isoenzymes; etc.); (2) Prophylaxis and therapy of the hemolytic disease (studies on the amniotic fluid; intrauterine transfusion; anti-D application; etc.); (3) Automatization and documentation in the blood transfusion center; (4) Epidemiology and prevention in blood transfusion service; (5) Acquired defects of homeostasis (troubles of coagulation, etc.).

It will certainly be of interest to hematologists, as well as to the practical doctor. Its value, however, finds some limitations in the exclusive use of the German language, in the absence of even short summaries to the numerous papers, and in the absence of a subject index.

Bradykinin and Related Kinins Cardiovascular, Biochemical and Neural Action

Edited by F. Sicuteri, M. Rocha e Silva, and Nathan Back. Plenum Press - New York and London 1970. Volume 8 in the series «Advances in Experimental Medicine and Biology». Bound volume with cover; 17 × 26 cm; xxv+651 pages; numerous tables, graphs and black-and-white illustrations. Author and Subject Index. Price US \$ 27.50.

Here are the Proceedings of an International Symposium on the Cardiovascular and Neural Actions of Bradykinin and Related Kinins, held at Castel di Poggio, Fiesole (Florence), Italy, on July 21-25, 1969.

The papers presented deal with the biochemistry and the metabolism of bradykinin and its analogues; the pharmacological, biochemical and pathological significance of these chemical mediators is investigated.

The book points out the various fields of action of kinins, more particularly cardiovascular, biochemical and neural ones, but it also includes valuable information on many other related topics.