

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)