
An Introduction to Population Genetics Theory. *James F. Crow and Motoo Kimura.* Harper and Row, New York. 1970. 591 p. \$13.95.

The authors' stated intention is to present the field of population genetics at a level suitable for graduate students and advanced undergraduates interested in genetics and population biology. The title of the book implies that it is introductory in nature, and many topics are covered in considerable depth; however, other topics included are considered to be beyond the introductory level.

The first chapters deal with elementary concepts: models of population growth, Hardy-Weinberg equilibrium, and examination of departures from Hardy-Weinberg assumptions, e.g. inbreeding, assortative mating, and selection. The topics become more advanced in the later chapters and include treatment of the distribution of gene frequencies, and, for the first time in a genetics text, considerations of stochastic processes as they relate to changes in gene frequencies.

The authors have restricted themselves largely to theoretical aspects of population genetics and have drawn on experimental data to only a small extent. Due to the theoretical nature of the book, there is considerable mathematical development which at times becomes quite sophisticated, particularly in the later chapters. An appendix of statistical and mathematical procedures, together with problems, are of help in the earlier chapters, but in the later chapters there is no attempt to explain procedures; the reader is assumed to have a good mathematical background.

Included is an extensive bibliography, mainly citing theoretical papers, which should be of considerable value to anyone working in the area of population biology and genetics. The book is more suited to advanced students than to undergraduates, and should be a valuable reference to workers in this area, particularly the section dealing with stochastic processes and their applications to population genetics.

R. E. CLAY