

method does not always work the way we were taught in high school and that scientists are often blinded by their own preconceptions and often mold data to fit their own ideas.

This book would make excellent supplementary material for courses in general biology, evolution, and anthropology.

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## Genetics

### PRINCIPLES OF GENETICS

by Eldon J. Gardner and D. Peter Snustad. 6th ed., 1981. John Wiley & Sons, Inc. (One Wiley Drive, Somerset, NJ 08873). 681 p. \$23.95.

In this version of a venerable introductory genetics text, 18 chapters are treated in 611 pages (16 chapters and 537 pages in the 5th ed.), making the book manageable in quarter or semester courses. Problems and questions for each chapter, a glossary (17 pages), answers to all questions and problems (37 pages), and an index contribute to the usefulness of the volume.

The overall organization is classical and similar to the fifth edition: Mendelian genetics and mitosis/meiosis precede DNA and chromosome structure. Eukaryotic chromosome behavior (sex chromosomes, linkage, mapping) comes before recombination in bacteria. Four chapters (gene expression, mutation, genetic fine structure, regulation of expression) related to molecular genetics precede two chapters on chromosomes (aberrations and variations in number). Extranuclear inheritance is then taken up before two chapters on population aspects. The last two chapters are concerned with behavior genetics and human genetics.

The individual chapters show an appropriate mix of historical, classical, molecular, and applied/social genetics. For example, several aspects of human genetics are taken up prior to the last chapter on that topic. Several items appear in more than one chapter. For example, one gene-one band in *Drosophila* salivary chromosomes is discussed in Chapter 10 (Genetic Fine Structure), and mentioned in Chapter 12 (Chromosome Aberrations). In this and other cases, appropriate cross-referencing is made.

Rapid perusal of the text reveals the topics of bidirectional and discontinuous DNA replication, supercoiled DNA, nucleosomes, one DNA molecule per eukaryotic chromosome, Cot values and reassociation kinetics, transposons and insertion sequences, dosage compensation, Holliday and Whitehouse models of crossing over, gene conversion, introns or spacer sequences, recombinant DNA and NIH guidelines, homeotic mutants, chromosome (Q-, G-, R-, and C-) banding techniques, the Ames test, and human chromosome mapping. These topics indicate the care given to current investigations. The grandfather method for mapping the human X-chromosome, bithorax studies in *Drosophila*, the 1979 version of the David-Britten model of eukaryotic gene regulation [*Science* 204(4397):1052-1059 (1979)], transgenesis and nucleic acid sequencing methods are topics that individuals might wish further details about in this text.

All in all, Gardner and Snustad have provided in 600+ pages a good reflection of the current status of genetics for the introductory level.

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