proaches to the scattering problem, such as the close-coupling approximation, Born approximation, and variational methods. The session on experimental problems covered the problems associated with charged-neutral, charged-charged, and neutral-neutral particle interactions.

Most of the papers in this volume contain sufficient background material so that they are self-contained and useful for reference. They are well edited, and I noted only a very few typographical errors. Included are contributions from most of the major centers engaged in atomic collisions work in the United States, Canada, the United Kingdom, the Netherlands, France, West Germany, Poland, and the Soviet Union. Unfortunately, owing to its high price, the volume will be inaccessible to the private purchaser, but all laboratory groups working in this area of research will find it a most worthwhile addition to their library collections.

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## Genetics

**Genetics for the Clinician**. C. A. Clarke. Davis, Philadelphia, ed. 2, 1964. xx + 377 pp. Illus. $9.

"Ford has pointed out a close parallel between the behaviour of the chromosomes as seen under the microscope and that of the genes whose action can be inferred by tracing the inheritance of the characters which they control." Thus, we learn on page 1 that the author is not interested in historical perspective.

The first edition of this book, designed to acquaint clinicians and medical students with genetics, appeared in 1962. One might have hoped that the many errors and half truths of the first edition would have been corrected, but most are retained in the second edition. The bands of the giant chromosomes of salivary glands of *Drosophila* are still called chromomeres (p. 2), and DNA still will stand boiling for 1 hour (p. 7). On page 45, mutation is said to lead to abnormal genetic ratios.

On page 50, Clarke makes the following statement: "It is at first sight difficult to understand why a very disadvantageous gene such as that controlling epiloia or achondroplasia remains 'dominant.' One would have expected that the more extreme forms of these diseases would have been selected against and those less severe selected for, which would eventually result in the character becoming recessive." However, there is no difficulty if one does not assume, as Clarke does, that "genes always have more than one effect (pleiotropy)" (p. 49) and that these diseases are polymorphisms maintained by heterozygote advantage.

The following statement is on page 52: "Primaquine sensitivity, as opposed to favism . . . is controlled by a single gene, the effects of which are much more marked in Caucasians than in Negroes and presumably in the latter the gene-complex partially inhibits the action of the gene." By gene-complex is meant the genetic background, but it is now well established that different alleles are involved in Caucasians and Negroes. Furthermore, favism is well established as a single gene effect.

On page 54, assortative mating is given as one situation that upsets the constancy of gene frequencies from one generation to the next as predicted by the Hardy-Weinberg law. On page 103, partial sex linkage in man is discussed as if it were an accepted fact rather than a most unlikely event.

In the first edition, the discussions of nondisjunction ignored the possibility that nondisjunction might occur at the second division of meiosis. The present edition acknowledges the possibility in a footnote (p. 25), but the discussion of recognition of maternal versus paternal nondisjunction (pp. 34 and 35) still assumes that all nondisjunction must occur at the first meiotic division. Thus, we learn that mating of a man with normal color vision to a woman heterozygous for color blindness cannot produce a color-blind offspring who is XXY (Klinefelter's syndrome). However, two such cases are listed in the review of chromosome abnormalities by M. A. Ferguson-Smith (*Prog. Med. Genet.* **1**, 292, 1961).

Clarke uses Haldane's rule as a point of departure in introducing some new material on race crossing (p. 84): "There is a hint that there *may* [italics his] be an excess of women in a population of F. 1. hybrids (Negro × Caucasian) studied by Miller and Harrison (personal communication)." Such an effect would be very interesting, but it should be subjected to careful scrutiny before being included in an introductory book. The use of italics does not relieve the author of this responsibility. Furthermore, the author presents a pedigree of a Caucasian × Chinese mating in which one son (the propositus) died of carcinoma of the rectum at age 24, and one of his sons (by a Caucasian wife) subsequently died of leukemia. It is suggested that genic imbalance due to diverse racial origins of the parents might have been a contributing factor. This cannot be refuted, but the answer will not come from study of haphazardly collected pedigrees, and the inclusion of this pedigree is a great disservice to those who are trying to arrive at correct answers by carefully controlled observations.

I noted many other errors, but their recital will serve no useful purpose. Fortunately, there are several other books from which clinicians and medical students can learn genetics.

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## Textbook

**Wood and Cellulose Science**. Alfred J. Stamm. Ronald, New York, 1964. x + 549 pp. Illus. $15.

Technical books are often written during or at the close of a segment of a career. This one was written between careers. After years of pioneering work at the U.S. Forest Products Laboratory, where he introduced and successfully exploited new approaches to the understanding of the properties of wood, the author, Alfred J. Stamm, turned his generally acknowledged talents for communication to teaching. The book was written to meet the needs for a textbook on the physiochemical properties of wood and related materials. The topics are well balanced between theoretical subjects (such as x-ray diffraction, thermodynamics of adsorption, capillary properties, diffusion, electrokinetics, and molecular properties) and technological subjects (such as dimensional stabilization, drying, preservation, gluing, and sheet formation). The contents of the 27 chapters reflect the author's broad research interests. The literature cited at the end of most of the chapters contain references to his original work, and many of the figures and tables are taken from his publications. Although one normally questions the merit of a book written in