General Genetics. M. J. Sirks. Nijhoff, The Hague, 1956. 628 pp. Illus. Gld. 35.

This English edition of Sirks' *General Genetics,* first published in Dutch in 1922, emphasizes the historical aspects of the subject. In this respect it will serve as a useful reference book, especially to the work prior to 1940.

In the hands of Sirks and his translators, Jan Weijer and D. Weijer-Tolmie, however, this approach does not lend itself well to an exposition of the subject. The book appears to have accumulated information through the five Dutch editions and the present English one without critical evaluation or successful integration of the material so brought together.

An example will illustrate. Meiosis is nowhere clearly described. The old argument of pre- and postreduction is treated at some length before any attempt is made to relate it to what is currently known about meiosis and crossing over. In this review of material of purely historical interest, the following statements appear: "Classic contributions to this very important problem have been given by Gregoire (1905, 1910). Unfortunately his studies in this sphere are almost forgotten today." If one is not told what these classic contributions were or why they are important, it is not at all obvious why they are mentioned. Finally, Knapp is cited for the now generally accepted view that postreduction (second division segregation) is a result of crossing over between the locus concerned and the centromere. The earlier work that led to this interpretation (Bridges and Anderson, on *Drosophila* triploids; Anderson and others on attached-X chromosomes; and Lindegren on *Neurospora*) is not mentioned or cited in the bibliography.

The mechanism of crossing over is treated in a confusing way, with no clear statement about the importance of the question of randomness or nonrandomness with which strands participate in crossing over at a given level.

Figure 54 in the book, a graphic representation of the relation of crossing over to temperature in *Drosophila,* taken from Plough, shows a maximum at 13°C. Twenty years ago, H. F. Smith [*Nature* **138,** 329 (1936)] pointed out that the original data do not show the 13° maximum—that an error was made in correcting for control values.

Important concepts are sometimes stated carelessly. In discussing the statistical evaluation of observed deviations from expected genetic ratios, it is said that a ratio of deviation to standard error of less than 1.5 "proves an absolutely normal course of segregation." Incidentally, the ratio of deviation to standard error is called "probable error," a usage unfamiliar to me.

An attempt has been made to bring the book up to date in the translation. This must have been done hurriedly or carelessly, for there are several important omissions. Lederberg's important work on bacterial genetics is barely mentioned. The phenomenon of transformation is briefly considered, but no reference is made to the illuminating findings of Hotchkiss or of Ephrussi-Taylor. Bacterial viruses have perhaps contributed more to genetics in the decade just past than have any other organisms. They go unmentioned. The Watson-Crick structure of deoxyribonucleic acid is not referred to. Some of these omissions, particularly the latter, might be excused on the ground that they were announced too late to be included. However, mention is made of a paper published in 1954 by Weijer, one of the translators, a year after appearance of the Watson and Crick paper on deoxyribonucleic acid structure. Incidentally, a transposition in the bibliography gives Weijer's paper the date 1945.

Because of its inclusion of so much material of historical interest, *General Genetics* may be useful as a reference. It cannot be recommended as a well-organized, clearly written, and accurate account of the principles of genetics as they are understood today.

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Etude Radioanatomique de l'Os Temporal. M. Juster and H. Fischgold. Masson, Paris, 1955. 102 pp. Illus.

Anatomical structure approaches its peak of complexity in the interior of the temporal bone, which is so aptly called "the labyrinth." The authors of *Etude Radioanatomique de l'Os Temporal,* M. Juster and H. Fischgold, have made a unique study of this bone by making roentgenograms of macroscopic serial sections taken in the three planes most frequently employed in radiootology. These dry bone sections, 3 millimeters in thickness, were x-rayed with 2 × enlargements, thus bringing obscure structures, such as the aqueducts, into greater prominence. By viewing the individual sections, one overcomes the initial problem of superimposition and is able to interpret the temporal area in conventional roentgenograms of the skull with greater accuracy. In addition to the serial sections, the authors also present x-ray studies of the isolated bony labyrinth, the ossicles, and facial canal.

Each enlarged x-ray picture is accompanied by a labeled diagram of equal size, which greatly facilitates the interpretation and identification of the numerous anatomical structures. Finally, the authors have provided a brief text description of the radiographic structures of the temporal bone. This book should prove to be a great aid to otologists and others in the study of the ear and temporal area.

Structure is the basis of all function, both normal and pathological, and the authors have provided a means of elucidating the anatomy of a very important but difficult region of the human body. Further study and greater magnification of these radiographic sections may provide a means for earlier detection of otosclerosis and other ear diseases which are accompanied by structural changes in the temporal bone.

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Organic Analysis. vol. III. John Mitchell, Jr., I. M. Kolthoff, E. S. Proskauer, and A. Weissberger, Eds. Interscience, New York, 1956. 546 pp. Illus. $11.50.

Each volume of the Interscience *Organic Analysis* series is a collection of monographs on the determination of important functional groups and on modern techniques that are used in organic analysis. The third volume is more than 70 pages larger than the longest of the previous volumes, yet it contains monographs on only six subjects, as contrasted with nine in each of the earlier volumes. These statistics reflect an improvement in that each subject is now considered broadly, the treatment is more uniformly thorough, and all of the sections include explicit operational directions for selected analytic methods.

Each monograph is prefaced by a simple introduction, addressed to the reader who is not a specialist. The introductions are noteworthy in the way they undertake to orient the reader so that he will be able to make personal use of the information that follows. For example, the fourth monograph begins with a simple and lucid definition of olefinic unsaturation and its chemical characteristics and sets up, specifically, the chemical conditions that the analyst tries to achieve and those that he should avoid in order to obtain unambiguous and precise results.

The subjects treated in the present volume are the determinations of (i) organic acids, (ii) acid anhydrides, (iii) amines and amides, (iv) olefinic unsaturation; (v) analytic mass spectrometry, and (vi) analytic examination of synthetic coating resins. The monograph on the determination of organic acids is