ography at the end of each article.

This book—and the series—would be invaluable to an investigator in human heredity; to a physician who might come upon cases of the disorders discussed in the book; to a graduate student in genetics; and to a teacher of genetics. It has proved to be a source of enrichment for my own lectures in genetics. It could be used as outside reading for the undergraduate in genetics.

Margaret L. Watson
Simpson College
Indianola, Iowa

HUMAN HEREDITY AND BIRTH DEFECTS, by E. Peter Volpe. 1971. Bobbs-Merrill Co., New York. 166 p. $6.95.

This timely book is a part of the Biological Sciences Curriculum Study "Science and Society" series for the layman. It succeeds admirably in meeting its basic objectives of being "short, highly readable and non-technical."

One-third of the beds in children's hospitals are occupied by patients with birth defects. Furthermore, birth defects are the third most common cause of death in the newborn. This book emphasizes birth defects of obvious genetic origin—the best-understood defects. This orientation is well supported by discussions of human chromosomes, meiosis, and the nature and means of human inheritance.

Unfortunately omitted are several medical advances in the field of birth defects. Intrauterine transfusion of erythroblastotic fetuses in Rh disease is now a relatively common clinical procedure. Amniocentesis (sampling of amniotic fluid) is mentioned only in the context of sex determination; but there are now numerous clinical centers routinely performing amniocentesis in order to obtain fetal cells so that various birth defects, including mongolism and Tay–Sachs disease, may be predicted and prevented. Although several persons and foundations are justifiably mentioned for their contributions to the field, no mention is made of the National Foundation, once devoted to a successful fight against polio, whose considerable energies and talents today are aimed at the detection, prevention, and alleviation of birth defects.

Nevertheless, both teacher and student will find Dr. Volpe's brief book engrossing reading. It is warmly written and well illustrated; most important, it is *human*.

W. Ann Reynolds
University of Illinois
College of Medicine
Chicago

Human Biology

TEACHING ABOUT FAMILIES, by Hyman Rodman. 1970. Howard A. Doyle Publishing Co., Cambridge, Mass. 107 p. $4.50.

This is a brief, interesting, and thought-provoking appraisal of what is taught about family life in the secondary schools of the United States. It is a refreshing book in that it not only criticizes but offers excellent suggestions for improving family-life courses and textbooks.

The book is divided into six chapters, an epilogue, and two appendices. The first chapter deals with the major goals of family-life education; namely, to teach about families and to promote individual and family well-being. It justifies the teaching of family life in school and discusses the joint responsibility of school, church, and home in family-life education. Family-life teachers are cautioned against the error of assuming that it is deviant not to marry and have children.

The second chapter—one of the most enlightening in the book—should cause the reader to become uncomfortable with the existing family-life textbooks. Rodman evaluates 11 of these, and he

(Continued on p. 108)

finds that important topics and controversial issues are omitted or treated superficially; that a rosy hue is attached to all family life; that magical or fictional solutions are offered for family problems; and that the family life of different cultures within the United States is ignored.

Seven recommendations for improving textbooks and teaching about families are presented in the third chapter. This is followed by a discussion of the feasibility of implementing the recommendations. This discussion is the weakest portion of the book: it is too brief, and it naïvely assumes that community criticism of the discussion of controversial topics in the classroom can be largely reduced if only the teacher takes a straightforward attitude toward the quest of knowledge.

The fourth and fifth chapters deal with the teaching of values and of controversial topics in the classroom. The proper division of responsibility between the home and the school is discussed, and a careful, factual approach is advocated. Examples of how textbooks should cover controversial topics are presented in the sixth chapter. Excellent presentations are made of the topics of premarital sexual intercourse, abortion, and mixed marriage.

The appendices include a list of supplementary materials for family-life courses and a discussion of the dishonesty that exists in the revision of most family-life textbooks.

This book is a must for those who teach or write books about family living. It should be of interest to biology teachers as well.

Thomas P. Evans
Oregon State University
Corvallis

Microtechniques

BIOLOGICAL TECHNIQUES IN ELECTRON MICROSCOPY, by Clinton J. Dawes. Barnes & Noble, Inc., New York. 1971. 207 p. $4.95 (softback).

This clear, concise, and complete book covers all aspects of tissue preparation, including fixation, dehydration, embedding, ultramicrotomy, staining, and replication. Of particular value are the chapters on fixatives and embedding media: they present formulas and procedures for using a variety of buffers and fixatives, and they discuss the epoxy resins, methacrylates, and polystyrene plastics. Additionally, the author points out the subtle differences in the preparation of plant, animal, and bacterial cells with respect to fixation and buffers. The last chapter gives several useful tips on photographic techniques, including the selection of films and papers. Appendices list commercial suppliers of chemicals and equipment; descibe enzyme-localization techniques; explain the chemistry of epoxy resins; offer a sample preparation-schedule; and list general references.

The book is a welcome addition to the literature of electron microscopy. It should serve as a useful one-source laboratory manual.

Ronald P. Hathaway
Colorado College
Colorado Springs

Textbooks

GENERAL BOTANY, by Wilhelm Nultsch. 1971. Academic Press, New York. 452 p. $10.00.

This book, which first appeared in German in 1968 under the title *Allgemeine Botanick*, appears to be dated because of textual omissions. I feel few teachers of general botany would select this as their sole textbook. However, the book does have several strong points and, with supplementary materials, may be of use to some.

The book is appropriate for the beginning botany student in college. It includes a fairly detailed introduction to the chemistry of botany, a modern treatment of cytology, a classical discussion of anatomy and morphology supplemented by a chapter on development, several strong chapters on physiology, a disjointed treatment of genetics, and an extraneous but delightful section on the movement of plants. In a practice that seems to be becoming regrettably common, the morphology of plant groups is discussed in one place but their reproduction is reviewed elsewhere.

The greatest weakness of the book seemed to be acknowledged by the author when he appended three summaries. Taking fewer than 13 pages, these deal with taxonomy, ecology, and evolution. No biology student will be satisfied with such cursory treatment. Nultsch justifies the omission of a substantial section on ecology by saying "ecology is such a timely and rapidly changing field, it will be left to the individual instructor and student to develop and explore such phases as they choose." But the same statement could be made about many of the subjects that are adequately treated. I find the omission of a serious treatment of evolution to be most grievous.

The photos and line drawings are excellent. The text is lucid, thanks in part to the translation editor, James E. Gunckel.

In spite of its omissions the book contains a great deal of exciting, well-

(Continued on p. 110)