

of the research; for example, the project's "major crisis" arose when members of one control group demonstrated an unusual partisanship and hostility (page 123). Problems also arose in the analysis of the data: was it "really a control"? (page 154). The authors discuss these and other questions with freshness and freedom. Their observations should be extremely useful to those planning educational research in medical schools and in other settings.

The busy reader will find the "meat" of the work compressed in the 60 pages of Chapters 10, 11, and 12. The authors wisely present this unit (Part 2) early in the book, for it summarizes the main points of the research, findings, conclusions, and implications for the program. Some of the best writing in the book is found in these chapters. After reading the description of the educational program in Part 1, one gets a clear impression of the consequences of the research for the subsequent program. Parts 1 and 2 (about 160 pages) succeed in bringing to life the "Colorado story." In a foreword, Ward Darley (executive director, Association of American Medical Colleges) discusses the Colorado experiment in relation to the changing scene in American medical education.

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MILTON J. HOROWITZ  
School of Medicine,  
Western Reserve University

**A California Flora.** Philip A. Munz and David D. Keck. Published for the Rancho Santa Ana Botanic Garden by the University of California Press, Berkeley, 1959. 1681 pp. Illus. \$11.50.

For a number of reasons, this is a very difficult book to review. First, one must emphasize that it is an important and extremely useful contribution to knowledge, and its importance is certainly more general than its title might imply to the uninitiated. Nevertheless, it has some curious failings that should be pointed out for the benefit of the uninitiated, into whose hands it will certainly come.

The only manual on the flora of California which has been available up to now is that of W. L. Jepson, published in 1925. Munz and Keck, then, fulfill

a need for an up-to-date account of the flora, and their account has the additional advantages of an excellent introduction, the use of the metric system for measurements, and a useful list of authors who have been concerned with plants in the flora. (However, compared with Jepson's volume, the illustrations are so few as to be essentially insignificant.) For the botanist working in California, the only other sources available are the incomplete *Flora* of Jepson and the unfortunately expensive, four-volume *Illustrated Flora* of Abrams. The introductory sections on geological history (by D. I. Axelrod), on recent geological history and the vegetation, and on California plant communities are worth reading in their own right, whether or not one works in California; of course, the treatment of families and genera by specialists will always have scope and interest beyond a purely local one.

On these considerations, the book must be commended to botanists generally. On other counts, however, disappointment must be expressed. The value of the book for teaching is reduced by the paucity of illustrations, the thin paper, and the relatively high cost; probably, however, none of these could have been avoided. Unfortunately an arrangement of families has been used which differs greatly from the Englerian system customarily employed. Admittedly the arrangement, largely due to Keck, is an improvement over the Englerian one, but the fact remains that the latter system is still the one employed in the majority of manuals and herbaria. Furthermore, the reasons for the changes that have been made although they may be, to an extent, obvious to an angiosperm taxonomist, are not explained for the beginner.

In the *Flora*, wherever possible, published chromosome numbers are given for the species. This information may be useful for purposes of comparison or for use in selecting interesting problems for future research. However, the numbers given are not always correct, and there is no bibliography, although the references cited presumably may be found in the *Chromosome Atlas* of Darlington and Wylie. Unfortunately, the hypothetical  $x$  number (invented by Darlington) is sometimes given instead of the  $n$  number (actually determined)—for example, *Hunnemannia*.

Finally, I must mention the rather large number of typographical errors, particularly in the taxonomic section.

These range from the transposition of several lines in the keys and descriptions and the inversion of type, to the consistent misspelling of the name of a genus (*Cynanchum*).

Despite these criticisms, more of method than of content, the book will be indispensable to taxonomists and to those concerned with the flora of the Pacific States.

RICHARD W. HOLM  
Department of Biological Sciences,  
Stanford University

## New Books

*Handbook of Electrochemical Constants.* Compiled by Roger Parsons. Academic Press, New York; Butterworths, London, 1959. 118 pp. \$6.

*The Helicopter.* Jacob Shapiro. Macmillan, New York, 1960. 269 pp. \$4.50.

*Isotopic Tracers.* A theoretical and practical manual for biological students and research workers. G. E. Francis, W. Mulligan, A. Wormall. Univ. of London Press, London; Essential Books, Fairlawn, N.J., ed. 2, 1959. 545 pp. \$8.40.

*Jaarboek.* 1958–1959. Koninklijke Nederlandse Akademie van Wetenschappen. North-Holland, Amsterdam, 1959. 349 pp.

*Materials and Techniques for Electron Tubes* (revised edition of *Materials Technology for Electron Tubes*, 1951). Walter H. Kohl. Reinhold, New York; Chapman and Hall, London, 1960. 658 pp. \$16.50.

*Mathematics Refresher.* Kurt Wolter. Philosophical Library, New York, 1959. 96 pp. \$3.75.

*Mechanisation of Thought Processes.* vols. 1 and 2. National Physical Laboratory, Symp. No. 10. Her Majesty's Stationery Office, London, 1959 (order from British Information Service, 45 Rockefeller Plaza, New York). 990 pp. \$9.29.

*New and Nonofficial Drugs.* 1960. Lippincott, Philadelphia, Pa., 1960. 796 pp. \$3.35.

*Nuclear Power Plant.* E. Openshaw Taylor. Philosophical Library, New York, 1959. 191 pp. \$7.50.

*Polysaccharides in Biology.* Transactions of the fourth conference. George F. Springer, Ed. Josiah Macy, Jr. Foundation, New York, 1959. 326 pp. \$5.95.

*Principles of Paleobotany.* William C. Darrah. Ronald, New York, ed. 2, 1960. 302 pp. \$6.50.

*Radioisotope Techniques.* Ralph T. Overman and Herbert M. Clark. McGraw-Hill, New York, 1960. 492 pp. \$10.

*La Science et la Théorie de l'Information.* Léon Brillouin. Masson, Paris, 1959. 402 pp. F. 4800.

*The Story of a Tlingit Community.* A problem in the relationship between archeological, ethnological, and historical methods. Bureau of American Ethnology, Bulletin 172. Frederica de Laguna. Smithsonian Institution, Washington, D.C., 1960 (order from Supt. of Documents, GPO, Washington 25, D.C.). 264 pp. \$2.

*Subsurface Mapping.* Margaret S. Bishop. Wiley, New York, 1960. 207 pp. \$5.75.