

useful for reference, and as a guide to the published data, any need for a critically evaluated tabulation of such data does not seem to be filled here.

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**The Orchids.** A scientific survey. Carl L. Withner, Ed. Ronald Press, New York, 1959. ix + 648 pp. Illus. \$14.

The Orchidaceae, one of the largest plant families, has until recently been neglected by students of the various phases of botany, except taxonomy. Withner's book, long awaited by scientists, horticulturists, and amateurs, attempts to bridge this gap for the first time.

The various phases of orchid biology are discussed by 16 scientists and horticulturists. "Not only have the several authors covered their respective fields as they exist at present, but they have attempted to correlate and evaluate the researches of different scientists so that the body of information included in this book means much more than an annotated bibliography or a report on a number of scattered papers." In fact, ideas for further research may be based upon the following informative chapters: "Classification," "Developmental anatomy," "Aspects of variation," "Embryology," "Orchids and cytology," "Hybridization," "Physiology," "Mycorrhiza of orchids," "Photoperiodic and temperature responses," "Fungal and bacterial diseases," "Virus diseases," "Orchid pests and their control," and "Vanilla, the orchid of commerce."

Perhaps one of the most valuable contributions of the book is its key to the tribes and subtribes of the family, presented for the first time in English, and thus making understandable and available to the public the intricate correlation among the various groupings in a field previously limited to scientists. Special mention also should be made of the two-fold approach in the chapter "Orchids and cytology." "This chapter has been written for two types of readers: one who knows little about orchids but a great deal about cytology, and the other who knows a great deal about orchids but little about cytology. An attempt has been made here to satisfy both without offending either, by assembling the information in the

framework of the history of cytology in orchids and by incorporating the results of research of the author not published elsewhere."

Of course, as with most scientific books, *The Orchids* has its shortcomings. One would expect that a scientific survey of a family would contribute towards the understanding of such problems as origin, evolution, distribution, and biogeography. Unfortunately these important and basic phases are not included in this scientific survey.

In general, I welcome *The Orchids* as the first and as a comprehensive scientific treatise on the family as a biological unit, and I hope that other readers will find it to be a useful source of information.

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Orchid Herbarium of Oakes Ames,  
Botanical Museum, Harvard University

## New Books

*Advances in Agronomy.* vol. 11. A. G. Norman, Ed. Academic Press, New York, 1959. 438 pp. \$12. Contents: "Water and its relation to soils and crops," "The economics of fertilizer use in crop production," "Recent developments in agricultural machinery," "Fertilizer production and technology," "Soils and land use in the Netherlands," "Effect of nitrogen on the availability of soil and fertilizer phosphorus to plants."

*A History of the American Dental Association.* A century of health service. Robert W. McCluggage. American Dental Assoc., Chicago, Ill., 1959. 520 pp. In the introduction Richard H. Shryock says, "This isolation of one specialty [dentistry] as a distinct guild is one of the most interesting phenomena in the history of medicine as a whole. In order to understand it, one needs to follow the evolution of dental practice, and particularly the development of what may be termed 'organized dentistry' in the United States. It is just this theme which is followed in the present work."

*Scientific Manpower, 1958.* Papers of the seventh conference on scientific manpower. Symposium on demographic and sociological aspects of scientific manpower. National Science Foundation, Washington, D.C., 1959. This report is the third in a series of annual summaries of developments relating to scientific manpower. The report contains the papers of the annual scientific manpower conference held during the meeting of the AAAS; it also contains four papers on related topics read at a meeting sponsored by the American Sociological Society.

*Solid State Physics.* Advances in research and applications. vol. 9. Frederick Seitz and David Turnbull, Eds. Academic Press, New York, 1959. 563 pp. \$14.50. Contents: "The electronic spectra of aromatic molecular crystals" (H. C. Wolf);

"Polar semiconductors" (W. W. Scanlon); "Static electrification of solids" (D. J. Montgomery); "The interdependence of solid state physics and angular distribution of nuclear radiations" (E. Heer and T. B. Novoy); "Oscillatory behavior of magnetic susceptibility and electronic conductivity" (A. H. Kahn and H. P. R. Frederikse); "Heterogeneities in solid solutions" (A. Guinier); and "Electronic spectra of molecules and ions in crystals." Part 2, "Spectra of ions in crystals" (Donald S. McClure).

*Soil, Grass and Cancer.* Health of animals and men is linked to the mineral balance of the soil. André Voisin. Translated from the French by Catherine T. M. Herriot and Henry Kennedy. Philosophical Library, New York, 1959. 319 pp. \$15.

## Reprints

*Civilization.* V. F. Lenzen, Stephen C. Pepper, George P. Adams, D. S. Mackay, Edward W. Strong, A. I. Melden, William R. Dennes. Univ. of California Press, Berkeley, 1959 (originally published as vol. 23 of the University of California's *Publications in Philosophy*, 1941). 184 pp. \$1.50. In the preface Dennes writes that "In these studies, first published seventeen years ago, the authors examined issues which in 1941 they judged to be fundamental in the twin enterprises of explaining and evaluating patterns of human social living. Their republication invites us to consider whether the processes of history during two turbulent decades, or the progress of philosophical interpretation and criticism, have either resolved or moved beyond the problems here discussed, or whether and in what respects the analyses are still relevant."

*Folkways.* A study of the sociological importance of usages, manners, customs, mores, and morals. William Graham Sumner. Dover, New York, 1959 (unabridged republication of 1906 ed). 699 pp. \$2.49. Sumner, who was a professor of political and social science at Yale University from 1872 until his death in 1910, provided an examination of usages, manners, customs, mores and morals. Among the subjects treated in this work are characteristics of the mores, societal selection, infanticide, killing the old, the social codes, primitive justice, and popular sports.

*An Elementary Treatise on Fourier's Series and Spherical, Cylindrical, and Ellipsoidal Harmonics.* With applications to problems in mathematical physics. William Elwood Byerly. Dover, New York, 1959 (unabridged republication of the last edition; originally published by Ginn, 1893). 296 pp. \$1.75.

*A History of Science, Technology and Philosophy.* In the 16th and 17th centuries. vol. 1 and vol. 2. A. Wolf. Second edition prepared by Douglas McKie. Harper, New York, 1959 (reprinted from ed. 2, 1950). 686 pp. \$1.95 each. The earlier edition was described by I. Bernard Cohen in *Isis* as "An indispensable work for studying the period. . . ."

*On Understanding Physics.* W. H. Watson. Harper, New York, 1959 (reprint of 1938 edition). 160 pp. \$1.25.