books of the week

The Life Sciences-National Academy of Sciences, Washington, D.C., 1970, 526 p., \$10.50.

More than three years of time and the combined efforts of some 200 scientists went into this opus which is aimed at explaining the enterprise called research in the life sciences to Congressmen, administrators and interested laymen. An offspring of Biology and the Future of Man (Oxford University Press), The Life Sciences is something of a handbook for research and research support. Beginning with a series of recommendations regarding the future of scientific research and education, it goes on to document in some detail a sampling of the major achievements of recent decades, taking great pains to demonstrate that they were the consequence of free and basic research rather than work undertaken with a specific goal in mind.

Among the subjects discussed are the life and times of a cell, focusing on photosynthesis, metabolism and cell division; biological research and medical practice, highlighting vances in treatment that have sprung from achievements in fundamental research; problems of the environmentwater, air, renewable resources. For the academic administrator or graduate student, sections zeroing in on and summarizing the process and problems involved in traveling the path from undergraduate student to Ph.D. to fullfledged scientist contain much that is interesting.—B.J.C.

ADOPTING OLDER CHILDREN—Alfred ADOPTING OLDER CHILDREN—Alfred Kadushin—Columbia Univ. Press, 1970, 245 p., \$10. Experimental study presents, primarily in the parents' own words, some of the joys, satisfactions, difficulties and disappointments of parents who accepted a child for adoption when the child was five years of age or older. Being more self-conscious about parenthood, the insights of the adoptive parent can help all parents.

BATTERIES AND ENERGY SYSTEMS—C. L. Mantell—McGraw-Hill, 1970, 221 p., illus., tables, \$14. Up-to-date guide encompasses both primary and secondary batteries, outlines in tabulated form the characteristics and advantages of the batteries, comparing their voltages, amperages and power capabilities.

THE BIOLOGICAL CLOCK: Two views—Frank A. Brown, Jr., J. Woodland Hastings and John D. Palmer—Academic Press, 1970, 94 p., illus., paper, \$1.95. Introductions to biological rhythms and clocks, presents two hypotheses based on research—environmental timing and cellular-biochemical rhythm.

BIRDS OF GUATEMALA—Hugh C. Land—Livingston Pub. Co., 1970, 381 p., 44 color plates by author and H. Wayne Trimm, maps, \$10. Published for the International Committee for Bird Preservation, Pan-American Section. Comprehensive guide to 660 species, descriptions include range, habitat, status and field notes.

BIRTH CONTROL—Garrett Hardin—Pegasus, 1970, 142 p., illus., \$6.95; paper, \$1.95. Published under the general editorship of the BSCS, the book deals mainly with the biological facts of anatomy and physiology, but also considers the ethical concepts that determine human reactions. determine human reactions.

CELL MEMBRANE TRANSPORT: Principles and Techniques—Arnost Kotyk and Karel Janacek—Plenum Press, 1970, 498 p., illus., \$35. A comprehensive sourcebook of theory, experimental data and analysis of research techniques involved in conducting cell transport studies.

COLORIMETRIC METHODS OF ANALY-SIS Including Photometric Methods, Vol. IVAA—Foster Dee Snell and Cornelia T. Snell—Van Nostrand Reinhold, 1970, 626 p., illus., \$24.50. Supplement volume, brings up to date the chapters on urea and related compounds, compounds with inorganic compounds, compounds with inorganic radicals and elements, sterols, hormones and

A DISCUSSION ON DETERMINATION OF SEX—G. W. Harris and R. G. Edwards, Organizers—Phil. Trans. Roy. Soc. Lond. B. Vol. 295, 1970, 206 p., 23 plates, illus., paper, \$18.20. Topics range from genetic basis for the determination of sex, and natural sex reversals in vertebrates to experimental control of psychosexuality, and aspects of hermaphroditism.

ELEVENTH HOUR: A Hard Look at Conservation and the Future—Alexander B. Adams—Putnam, 1970, 378 p., \$7.95. An informed discussion of the problems of conservation facing America, and of the inadequate measures, facilities and efforts made to protect the nation's resources.

FREE-ACCESS HIGHER EDUCATION—Warren W. Willingham—College Entrance Examin. Bd., 1970, 240 p., maps, tables, \$6.50 State-by-state survey, describes and analyzes the accessibility of higher educational resources and the demographic characteristics of various populations living within easy commuting distance of those colleges colleges.

AND ITS PATH-HUMAN MEMORY OLOGY—Jacques Barbizet, transl. from French by D. K. Jardine—Freeman, 1970, 198 p., illus., \$5. An evaluation of memory disorders. Describes from the standpoint of clinical pathology the many types of amnesia met by the neurologist and the psychiatrist.

HYDRAULICS OF RIVER CHANNEL CLOSURE—S. V. Izbash and Kh. Yu. Khaldre, transl. from Russian by G. L. Cairns—Butterworth (Daniel Davey), 1970, 174 p., illus., \$11.25. A clear account of the principles, laboratory and field study data, and practical experience gained on hydroelectric power projects in the Soviet Union.

KIDS, BRAINS & LEARNING: What Goes Wrong, Prevention and Treatment—Ray C. Wunderlich, M.D.—Johnny Reads, Inc., 1970, 534 p., illus., \$10.50; paper, \$7.50. Applies a pediatrician's medical know-how and insights to the learning problems of children. Contains a wealth of specific observations and helpful suggestions and helpful suggestions

THE MOLECULAR BASIS OF MUTA-TION—John W. Drake—Holden-Day, 273 p., illus., \$13.95. An introduction to muta-tional mechanisms, primarily concerned with procaryotic microorganisms, with emphasis placed on bacteriophage systems. Heavily referenced for the use of professional investigators investigators.

REPORT OF THE COMMISSION ON TESTS: I. Righting the Balance. II. Briefs—Commission on Tests, David V. Tiedeman, Chmn.—College Entrance Examination Bd., 1970, 118 p., 194 p., paper, \$2, \$3, boxed, \$4.50 together. Reviews the testing function on American education considers possibilities in American education, considers possibilities of fundamental changes, and offers recom-

THE ROOTS OF MANKIND—John Napier—Smithsonian Institution (Braziller), 1970, 240 p., photographs, drawings, maps, tables, \$6.95. Establishes for the interested nonanthropologist a solid zoological base line for the structural differences between man and apes, and uses the latest fossil evidence to describe the evolution of man's unique physical characteristics.

THE SCIENCE OF THE CLOUDS—R. A. R. Tricker—Am. Elsevier Pub. Co., 1970, 144 p., color plates, photographs, diagrams, \$6.95. Generously illustrated classification and description of the physics of clouds, with suggestions for experiments.

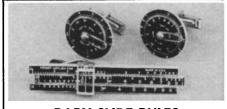
TOOLS OF THE OLD AND NEW STONE AGE—Jacques Bordaz—Natural Hist. Press, 1970, 145 p., photographs by Lee Boltin, drawings, \$5.95; paper, \$2.45. Describes for the layman and students of archeology the range of function, complexities of manufacture, and the ingenuity and beauty demonstrated in the early stone implements.

UNDERSTANDING THE RUSSIANS: A Citizen's Primer—Foy D. Kohler—Harper, 1970, 441 p., \$10. Former Ambassador to the U.S.S.R. and lifelong student of international affairs provides insight into the workings of the Russian leadership, bureaucracy and people.

WHY METALS FAIL—R. D. Barer and B. F. Peters—Gordon & Breach, 1970, 345 p., 350 photographs, diagrams, \$35. Aimed at the non-metallurgist engineer, the authors present information in the form of 134 case histories which apply to a wide variety of environments and metal uses.

WILD FLOWERS OF OHIO and Adjacent States—Isabelle H. Klein, rev. by Mary Thomas—Cleveland Mus. of Natural Hist., 1970, rev. ed., 204 p., color plates, drawings by Ruth C. Mayer, \$5.95. Excellent field guide to localized species of a rich mixture of flora including plant climax communities, glaciated surfaces and grasslands.

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