

Books

The Natural History Library

Doubleday Anchor Books
in cooperation with The American
Museum of Natural History

It's hard to find a publisher these days who isn't bringing out a series of books on science for the layman—but it's even harder to find a series that the layman can read with much interest or understanding. These paperbacks are an exception; they can not only be understood—they are even palatable.

The first 13 titles in the series, devoted to the life and earth sciences, include:

Modern Science and the Nature of Life by William S. Beck (\$1.45)

A brilliant and witty book about modern science in general and contemporary biology in particular.

From Fish to Philosopher by Homer W. Smith (\$1.45)

A noted physiologist's account of vertebrate evolution and adaption.

White Waters and Black by Gordon MacCreagh (\$1.45)

An absorbing record of a two-year expedition through some of South America's wildest jungle areas.

The Ocean Island by Gilbert C. Klingel (\$1.45)

Shipwrecked on Inagua, in the Bahamas, a naturalist (and born writer) settles down to explore the island and make a comprehensive study of its exotic flora and fauna.

Other titles:

The Pacific Islands (revised edition) by Douglas L. Oliver (\$1.45)

The Exploration of the Colorado River by John Wesley Powell (\$.95)

John and William Bartram's America, edited by Helen Gere Cruickshank (\$1.45)

John Burroughs' America, edited by Farida A. Wiley (\$1.45)

The Mountains of California by John Muir (\$1.25)

Horses by George Gaylord Simpson (\$1.45)

Shearwaters by R. M. Lockley (\$1.25)

The Wandering Albatross (re-

vised edition) by William Jameson (\$.95)

Dwellers in Darkness by S. H. Skaife (\$.95)

Mathematical Handbook for Scientists and Engineers

by Granino A. Korn and Theresa M. Korn
McGraw-Hill \$20

Reviewed by Cleve Moler, '61

This handbook is a handy reference to a wide range of mathematical definitions, formulas, theorems, methods, and tables. Any scientist or engineer who requires access to various ideas from mathematics should find it valuable.

The subjects covered include modern algebra, set theory, analytic geometry, vector analysis, Riemann and Lesbegue integrals, Fourier analysis, Laplace transforms, complex variables, differential and integral equations, matrices, Boolean algebra, tensor analysis, finite differences and numerical methods, probability and statistics, and special functions.

The book is very carefully organized with extensive cross-referencing, boxed formulas, different type faces and the like. In a few places it appears over-organized; some of the main points are obscured. But for the most part, the presentation is clear and concise. Good bibliographies of the major works in a subject are included at the end of the chapters.

The handbook can provide either a review of the results—all proofs are omitted—of a subject or an introduction to its basic concepts and methods. In addition, the index makes it a convenient mathematical dictionary.

Both members of the husband-wife author team have worked as engineers in the aircraft industry. Dr. Korn is currently Professor of Electrical Engineering at the University of Arizona.

FACULTY BOOKS

The Hubble Atlas of Galaxies

by Allan Sandage
Carnegie Institute of Washington \$10

This handsome atlas, compiled by Allan Sandage, member of the staff

of the Mount Wilson and Palomar Observatories, contains photographs and technical data on 176 galaxies. It is based partly on material left by Edwin Hubble, Mount Wilson and Palomar astronomer, who died in 1953. Dr. Hubble was an authority on spiral galaxies and was noted for his determination of the nature and distance of these stellar systems beyond our Milky Way.

Catalogue of Galaxies and of Clusters of Galaxies Vol. 1

California Institute of Technology \$6

Prepared by Fritz Zwicky, Caltech professor of astrophysics, with the collaboration of E. Herzog and P. Wild, Volume I of this catalogue contains the positions, photographic magnitudes, and other data for about 9500 of the brightest galaxies in the area from Decl. -3 to $+15^\circ$ of the north galactic cap as well as positions, populations, sizes, and estimated distances for about 1300 clusters of galaxies in the same area.

ALUMNI BOOKS

Ballistic Missile and Space Vehicle Systems

Edited by Howard S. Seifert
and Kenneth Brown

John Wiley & Sons \$12

A companion volume to *Space Technology*, edited by Dr. Seifert and published two years ago. Howard Seifert (Caltech PhD '38) is professor of aeronautical engineering at Stanford University and Director of Professional Development with the United Technology Corporation.

Radioisotope Applications Engineering

by Jerome Kohl, Rene D. Zentner
and H. R. Lukens

D. Van Nostrand Company . . . \$12.50

Based on a course in properties and applications of radioisotopes taught by Mr. Kohl at the University of California. Jerome Kohl (Caltech '40) is now coordinator of Special Products, General Atomic Division, General Dynamics Corporation in San Diego.

Engineering and Science