

# Books of the Week

For the editorial information of our readers, books received for review are listed. For convenient purchase of any U. S. book in print, send a remittance to cover retail price (postage will be paid) to Book Department, Science Service, 1719 N Street, N.W., Washington 6, D. C.

ABC'S OF MISSILE GUIDANCE—Ray Schapiro—*Sams (Bobbs)*, 96 p., illus., paper, \$1.95. Simple outline of guidance systems.

ADVANCES IN HYPERVELOCITY TECHNIQUES: Proceedings of Second Symposium—Arthur M. Krill, Ed.—*Plenum Press*, 795 p., illus., \$19.50. Significant developments in the production of hypervelocity environments and instrumentation.

ANIMAL BEHAVIOR: Its Normal and Abnormal Development—L. V. Krushinskii, transl. from Russian; preface by T. C. Schneirla—*Consultants*, 261 p., diagrams, \$12.50. Describes author's investigations of the reflex concept of the activity of the brain.

APPLICATION OF STATISTICS AND COMPUTERS TO FUEL AND LUBRICANT RESEARCH PROBLEMS—R. E. Streets and R. D. Quillian Jr., Chmn.—*Southwest Research Institute*, 218 p., \$10. Proceedings of symposium held in March 1962 in San Antonio, Texas.

ARCHAEOLOGY FROM THE EARTH—Sir Mortimer Wheeler—*Penguin Bks*, 252 p., illus., paper, 95¢. About techniques and tools of excavation and reconstruction.

ASTRONOMICAL PHOTOGRAPHY: From the Daguerreotype to the Electron Camera—Gerard de Vaucouleurs, transl. by R. Wright—*Macmillan*, 94 p., 21 plates, \$6. Traces the stages through which photography passed while becoming the astronomer's indispensable tool.

ATMOSPHERIC DIFFUSION: The Dispersion of Windborne Material from Industrial and Other Sources—F. Pasquill—*Van Nostrand*, 297 p., \$10.75. Discusses physical problems that arise in the windborne movement and dilution of material released into the local atmosphere.

BASIC ANXIETY: A New Psychobiological Concept—Walter J. Garre—*Philosophical Lib.*, 123 p., \$5. A theoretical treatise by Vienna-born psychiatrist.

BIOCHEMICAL APPLICATIONS OF GAS CHROMATOGRAPHY—H. P. Burchfield and Eleanor E.

Stoffs—*Academic Press*, 680 p., diagrams, \$22. Textbook and reference supplying both theoretical background and details of the applications of gas chromatography to biochemical problems.

CAREERS FOR SOCIAL SCIENTISTS: Anthropology, Economics, History, Political Science, Sociology—Jo Hubbard Chamberlin—*Walck, H. Z.*, 108 p., photographs, \$3.50. To help young people in their career choice.

COMMUNIST CHINA'S STRATEGY IN THE NUCLEAR ERA—Alice Langley Hsieh, Rand Corp.—*Prentice-Hall*, 204 p., paper, illus., \$2.25. Annotated study of recent Chinese military thinking, based on published materials from the China mainland.

COMPARATIVE BIOCHEMISTRY, A Comprehensive Treatise, Vol. III: Constituents of Life, Part A—Marcel Florin and Howard S. Mason, Eds.—*Academic Press*, 959 p., \$30. Provides a systematic comparison of the biochemical phenomena of life throughout the phylogenetic scale, covering fatty acids and lipids, mono- and poly-saccharides, nucleotides, nucleic acids and water.

THE COMPLETE SLIDE RULE HANDBOOK: Principles and Applications—Joseph Norman Arnold—*Prentice-Hall*, 206 p., illus., paper, \$2.45. Reprint (1954).

DRUGS, MEDICINES AND MAN—Harold Burn—*Scribner*, 248 p., illus., \$4.50. About the action of drugs on the human body, written by professor of pharmacology for the general reader.

EDUCATION DIRECTORY, 1961-1962, Part 3: Higher Education—Office of Education—*GPO*, 217 p., paper, 75¢.

EDUCATION FOR THE PROFESSIONS: Sixty-first Yearbook, Part II—G. Lester Anderson, Chmn.; Nelson B. Henry, Ed.—*National Soc. for the Study of Educ. (Univ. of Chicago Press)*, 312 p., \$4.50. Includes list of members' addresses.

ELEMENTS OF THE TOPOLOGY OF PLANE SETS OF POINTS—M. H. A. Newman—*Cambridge*, 214 p., diagrams, paper, \$2.95. Reprint of second edition (1951).

FACT AND THEORY IN COSMOLOGY—G. V. McVittie—*Macmillan*, 190 p., \$3.95. Reports astronomical observations relevant to cosmological theory, without detailed mathematical proofs.

GENETICS: Heredity, Environment and Personality—Warja Honegger, Hans Burla and Marco Schnitter—*Dell*, 120 p., illus., paper, 95¢. A visual text for adults, using four-color art work to illustrate scientific facts.

## FREE CATALOGUES OF SCIENCE BOOKS

State your interest! Mathematics, physics, history of science, general science, biology, social sciences, earth sciences, chemistry, languages, philosophy, engineering. Dover publishes over 100 books per year, quality production standards, priced for your budget. Dept. SNL, DOVER, 180 Varick St. N. Y. 14, N. Y.



### HI-POWER \$2.50 p.p. OCULAR

3 Lens, corrected, positive. EFL 12.5 mm (1/2 inch). 20X; f 2.8; 1 1/4" O.D. mount. Lens unit by world famous (100% American)

mfr. Balcoted. Limited stock at this price of \$2.50 p.p.

**HARRY ROSS**

Scientific & Lab Apparatus  
61-L Reade St., N. Y. 7, N. Y.

HANDBOOK OF ELECTRONIC TABLES & FORMULAS—Donald Herrington and Stanley Meacham, Eds.—*Sams (Bobbs)*, rev. ed., 192 p., illus., \$3.95. Formulas, laws, standards, symbols, installation and design data for the experimenter.

HEART: Anatomy, Function and Diseases—George Giusti and Rudolf Hoffman—*Dell*, 120 p., illus., paper, 95¢. Fundamental facts, presented visually for adults.

THE HISTORY OF SCIENCE AND THE NEW HUMANISM—George Sarton—*Indiana Univ. Press*, 196 p., paper, \$1.95. Reprint (1937).

HOW TO BUILD ELECTRONIC EQUIPMENT—J. Richard Johnson—*Rider, J. F.*, 290 p., photographs, diagrams, \$6.95. Profusely illustrated, book outlines in twelve chapters essential procedures.

HUMORS, HORMONES AND NEUROSECRETIONS: The Origins and Development of Man's Present Knowledge of the Humoral Control of Body Function—Chandler McC. Brooks and others—*State Univ. of N. Y. (Univ. Pubs.)*, 313 p., illus., \$7.50. Fully annotated study of the history of physiological thought.

INDIVIDUALIZING INSTRUCTION: Sixty-first Yearbook, Part I—Fred T. Tyler, Chmn.; Nelson B. Henry, Ed.—*National Soc. for the Study of Educ. (Univ. of Chicago Press)*, 337 p., \$4.50. Discusses theories and present school practices.

INTERCRYSTALLINE CORROSION AND CORROSION OF METALS UNDER STRESS—I. A. Levin, transl. from Russian—*Consultants*, 320 p., illus., \$18. Discusses corrosion of stainless steel, corrosion of carbon and low alloyed steels, and corrosion of light and nonferrous alloys under stress.

INTERNATIONAL SCIENCE AND TECHNOLOGY, Vol. I, No. 1—Robert Colborn, Ed.—*Conover-Mast Pubs.*, 75 p., illus., paper, monthly, \$10 per year, college rate \$5, without charge to professional scientists and engineers, write to publisher, 205 East 42nd St., New York 17, N. Y. Articles on thermoelectricity, hydrofoils, computers, and satellite astronomy.

INTRODUCTION TO HIGHER MATHEMATICS for the General Reader—Constance Reid—*Crowell*, 184 p., diagrams, paper, \$1.50. Reprint (1959).

LECTURES ON THE CALCULUS OF VARIATIONS—Oskar Bolza—*Dover*, 271 p., paper, \$1.65. Reprint (1904).

MANUAL OF THE TREES OF NORTH AMERICA (Exclusive of Mexico), 2 Vols.—Charles Sprague Sargent—*Dover*, 910 p., 783 illus. by Charles Edward Faxon and Mary W. Gill, paper, \$4 for set of 2 vols. Unabridged reprint of second (1922) edition.

MEDIAEVAL TECHNOLOGY AND SOCIAL CHANGE—Lynn White Jr.—*Oxford Univ. Press*, 194 p., 10 plates, \$6. Scholarly examination of the impact of technological innovation during the Middle Ages.

METHODS OF CARBOHYDRATE CHEMISTRY, Vol. I: Analysis and Preparation of Sugars—Roy L. Whistler and others, Eds.—*Academic Press*, 589 p., illus., \$20. Comprehensive reference on methods for use in both routine and experimental laboratory work.

THE METROPOLITAN PROBLEM AND AMERICAN IDEAS—Luther Halsey Gulick—*Knopf*, 175 p., \$3.75. First New York City Administrator proposes new approach to municipal government to meet the needs of urban life.

## INVENTORS NEEDED AT ONCE

If you have an invention you wish to sell outright or license on royalty, write us at once. We are seeking inventions of household items, games, toys, sports items, tools, and mechanical and technical devices. Patented or unpatented. For further information and free brochure outlining manufacturers' requirements, royalty rates, send name (no drawings, please) on letter or postcard at once.

**KESSLER CORPORATION, Dept. D-414, Fremont, Ohio**

## TO MEN WHO JUST "CAN'T LEARN" MATH!

More and more in our dynamic economy, a knowledge of basic mathematics pays off!

Whether in Engineering, Electronics, Mechanics, Construction, Pure Science, etc.—or in Estimating, or Trade and Finance, or Buying and Selling, etc.—the man who gets there fustest with the mostest, MATH-WISE, is likely to be rewarded handsomest!

Fortunately, there now exists, in a single volume of 240 fact-packed pages (including 195 clarifying illustrations), a basic course in mathematics, from arithmetic to the calculus, arranged logically and in order of difficulty. Explanations of principles are followed by worked examples.

This one-volume math "library" economizes not only your money but, more important, your time. Amazingly, the author, with a rare talent for simplifying the complicated, covers the whole gamut: treatment of fractions, decimals, square root and cube root, logarithms, progression averages, interest, algebra, equations, graphs, plane and solid geometry, trigonometry, differential and integral calculus; useful mathematical tables; summary of mathematical formulas, etc., etc.

This remarkable work, which already has aided thousands, will be of enormous help not only to those who have forgotten their mathematics but also to those now acquiring it. You may try it out at our risk. ORDER NOW.

### A REFRESHER COURSE IN MATHEMATICS by F. J. Camm

240 pages • 195 Illustrations

\$2.95 Postfree • 10-Day Money-Back Guarantee

EMERSON BOOKS, Inc., Dept. 441-M

251 W. 19th Street, New York 11

**MOALA: Culture and Nature on a Fijian Island**—Marshall D. Sahlins—*Univ. of Mich. Press*, 453 p., photographs, \$12.50. Anthropologist's field study of a primitive community, showing how it deals with nature and kinship groups in order to survive.

**MUSICAL INSTRUMENTS THROUGH THE AGES**—Anthony Baines, Ed.—*Penguin Bks*, 383 p., illus., paper, \$1.95. Historical study of the development of keyboard, violin group, harp, woodwinds and percussion, from primitive to contemporary.

**THE NEW WORLD, 1939/1946: A History of the United States Atomic Energy Commission**, Vol. 1—Richard G. Hewlett and Oscar E. Anderson Jr.—*Pa. State Univ. Press*, 766 p., illus., \$5.50. Detailed, yet readable historical study, based on official records and individual recollections, of the group of men and events that led to the development of the atomic bomb.

**THE NEW WORLD OF MATH**—George A. W. Boehm and Eds. of Fortune—*Dial Press*, 128 p., diagrams, paper, \$1.50. Reprint (1959).

**NUCLEAR WEAPONS AND THE CONFLICT OF CONSCIENCE**—John C. Bennett, Ed.—*Scribner*, 191 p., \$3.95. Essays by scientists and theologians, none of them absolute pacifists.

**100 MILLION LIVES: Maximum Survival in a Nuclear War**—Richard Fryklund—*Macmillan*, 175 p., \$3.95. Journalist describes "no-cities" plan of deterrence and controlled use of nuclear weapons.

**PHYSICAL SCIENCE: Men and Concepts**—Guy C. Omer Jr. and others—*Heath*, 601 p., illus., \$7.75. A general education course emphasizing the history of ideas in the physical sciences.

**POLAND**—Paul Cazin and Kazimierz Szyssle-Tobiczyk, transl. from French—*Hastings House*, 62 photographs, map, \$4.75. Views of Poland with geographical, historical and archaeological notes.

**PSYCHOLOGICAL DIFFERENTIATION: Studies of Development**—H. A. Witkin and others—*Wiley*, 418 p., illus., \$7.95. Concerned with deep-seated psychological patterns, their origin and stability as manifested by research and case studies.

**RUN, LIGHT BUCK, RUN!**—B. F. Beebe—*McKay*, 122 p., illus. by Larry Toschik, \$3. Story about a pronghorn.

**SALT MARSHES AND SALT DESERTS OF THE WORLD**—V. J. Chapman—*Interscience*, 392 p., photographs, diagrams, \$14.50. Comprehensive work of value to ecologists, conservationists, agriculturists, geographers and the intelligent layman.

**SCIENCE ABC**—David Knight—*Watts, F.*, unpagged, illus. by Gustav Schrotter, \$1.50. For the beginning reader.

**SPACE: The Architecture of the Universe**—Gottfried Honegger and Peter van de Kamp—*Dell*, 120 p., illus., paper, 95¢. Volume 1 of the new **VISUAL** series, conveying factual knowledge through integrated four-color drawings and texts written by scientists.

**STEAMBOATS ON THE MISSISSIPPI**—Ralph K. Andrist with C. Bradford Mitchell—*Am. Heritage (Meredith)*, 153 p., illus., \$3.95. Handsomely illustrated with paintings, maps and photographs of the period.

**STIPENDS AND SPOUSES: The Finances of American Arts and Science Graduate Students**—James A. Davis and others—*Univ. of Chicago Press*, 294 p., \$5. A study of how U.S. graduate students support themselves while pursuing their studies.

**THE STORY OF OUR TIME: Encyclopedia Year Book 1962**—Marion Lockwood, Ed. in Chief—*Grolier*, 432 p., illus., \$10. Includes review of science and technology in 1961.

**THE SWISS ALPS**—Vivian H. Green—*Batsford (Hastings House)*, 240 p., 55 photographs, maps, \$6.95. Essays on the land and its people.

**A VILLAGE THAT CHOSE PROGRESS: Chan Kom Revisited**—Robert Redfield—*Univ. of Chicago Press*, 187 p., illus., paper, \$1.25. Reprint (1950).

**WEIRD AND WONDERFUL ANTS**—Lynn and Gray Poole—*Obolensky*, 118 p., illus. by R. F. Peterson, \$3.50. Tells young adults about many fascinating aspects of ant life.

**WONDERS OF FLIGHT**—Robert Wells—*Dodd*, 64 p., photographs, diagrams, \$3. Describes in simple language the aerodynamics of thrust, lift, drag and speed.

**WONDERS OF THE RIVERS**—Virginia S. Eifert—*Dodd*, 64 p., illus. by author, \$3. Attractive book about natural life in and along rivers.

**WONDERS OF SOUND**—Rocco Feravolo—*Dodd*, 64 p., illus. by Christie McFall, \$3. Explains sound with simple experiments for young children.

**WORK AND LEISURE**—Nels Anderson—*Free Press*, 266 p., \$5. Study examines significant relations between work and leisure as current ways of using time.

• Science News Letter, 81:236 April 14, 1962

## MATHEMATICS

### Soviet Scientists Decipher Mayan Script

► **SOVIET MATHEMATICIANS** have succeeded in deciphering the hieroglyphic script of the ancient Mayas of Mexico and Central America with the help of modern electronic computing machines, the *UNESCO Courier*, monthly publication of the United Nations Educational, Scientific and Cultural Organization, reports.

Using only 40 hours of computer time, Felix Shirokov, lecturer at the Moscow Power Institute, describes how this was accomplished. The team working on the problem was headed by S. L. Sobolev, director of the Soviet Institute of Mathematics, Siberian Division.

At the height of their civilization, the Mayas not only possessed astronomical observatories but had a calendar more accurate than the present Gregorian calendar, the article states. "The Europeans, however, showed no interest in the Maya calendar," and "the Conquistadores . . . burned the Maya books," Mr. Shirokov continues.

The article continues: "Only three manuscripts have been preserved; they are now in museums in Madrid, Dresden and Paris. The Paris codex was in a bad state from the time of its acquisition and the Dresden codex was badly damaged during the Second World War and may be considered as nonexistent; fortunately this manuscript had been published and research workers are able to use a printed copy. There are also a number of inscriptions on stone, done in a special 'lapidary' script. These, taken together, constitute the source of our knowledge of the Maya system of writing."

Describing the task of deciphering the hieroglyphs, Mr. Shirokov writes that the Novosibirsk mathematicians used their electronic computer to find the frequency of letter combinations in the Maya language. Then the computer found the frequency of occurrence of the hieroglyphs in the Madrid and Dresden manuscripts. After that, there remained the job of correlating the frequencies.

An example from the translation follows: The young maize god fires pottery from white clay;

The god of death, the destroyer, fires a pot; The god of the North Star fires a pot; The yellow jaguar fires a pot.

• Science News Letter, 81:237 April 14, 1962

## STOP SAYING THAT TRAVEL IS TOO EXPENSIVE

### Passenger-carrying freighters are the secret of low cost travel

Yes, for no more than you'd spend at a resort, you can take a never-to-be-forgotten cruise to Rio and Buenos Aires. Or through the Canal to either New York or California. Or to the West Indies or along the St. Lawrence River to French Canada. In fact, trips to almost everywhere are within your means.

And what accommodations you get: large rooms with beds (not bunks) probably a private bath, lots of good food and plenty of relaxation as you speed from port to port.

Depending upon how fast you want to go, a round-the-world cruise can be yours for as little as \$250-\$300 a month. And there are shorter trips. Fast, uncrowded voyages to England, France, the Mediterranean; two- or three-week vacations up and down the Pacific Coast, or to New Orleans. Name the port and the chances are you can find it listed in "Travel Routes Around the World." This is the book that names the lines, tells where they go, how much they charge, briefly describes accommodations. Hundreds of thousands of travelers all over the world swear by it. Travel editors and travel writers say "To learn how to travel for as little as you'd spend at a resort get "Travel Routes Around the World."

It's yours for just \$1, and the big 112-page 1962 edition includes practically every passenger-carrying service starting from or going to New York, Canada, New Orleans, the Pacific Coast, Mexico, South America, England, France, the Mediterranean, Africa, the Indies, Australia, the South Seas, Japan, Hawaii, etc. There's a whole section called How to See the World at Low Cost, plus pages and pages of maps.

A big \$1 worth, especially as it can open the way to more travel than you ever thought possible. For your copy, simply tear out ad, print name and address, and mail with \$1 bill to **HARIAN PUBLICATIONS, 91 QUEEN ST., GREENLAWN (LONG ISLAND), NEW YORK.**

For only \$1 more get both the money-saving freighter guide above and Today's Best Buys in Travel, another big, practical guide that helps you save considerable money.

A real help in deciding where to go, what to see, and where to get your money's worth wherever you travel. Normally, both books together sell for \$2.50, but if you order promptly, send only \$2 for both. Money back if not satisfied.

To prove that you don't have to be rich to see the world, send for your copies now. Tear out ad, and mail with \$2 to address above.

## HERE'S A QUALITY STUDENT MICROSCOPE AT A BUDGET PRICE!

Although budget priced, the UNITRON Model MUS is definitely not just another student microscope. It includes these significant features often lacking in much more costly student models:

- NOT JUST a disc diaphragm . . . but an iris diaphragm for perfect control of aperture and contrast.
- NOT JUST a single focusing control . . . but both coarse and fine.
- NOT JUST a mirror . . . but a 0.65N.A. condenser for optimum illumination and resolution.
- NOT JUST two objectives . . . but three: achromatic 5X, 10X, 40X.
- NOT JUST an ordinary eyepiece . . . but a coated 10X Wide Field for large, flat fields.
- PLUS THESE SPECIAL FEATURES . . . larger stage projects beyond objective preventing damage to objectives and nosepiece. Automatic stop for fast focusing and prevent breakage of specimen slides and optics. Durable, sturdy — withstands the use and abuse of classroom and laboratory.



Price: **\$75**  
Only

(\$67.50 each in lots 5-10)

ASK FOR A FREE 10 DAY TRIAL

Even higher discounts on quantities more than 10.

## UNITRON

INSTRUMENT COMPANY • MICROSCOPE SALES DIV.  
66 NEEDHAM ST., NEWTON HIGHLANDS 61, MASS.

Please rush UNITRON's Microscope Catalog. **5A-1**

Name \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_