

# 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 RADIOTELEPHONY**—Leo G. Sands—*Sams*, 96 p., illus., paper, \$1.95. Simple explanations of radio-communication essentials.

**AFFECT, IMAGERY, CONSCIOUSNESS, Vol. I: The Positive Affects**—Silvan S. Tomkins with Bertram P. Karon—*Springer*, 522 p., \$8. Sets forth the author's theory of personality, relating the nature of human motivation to affect, imagery and consciousness.

**ANIMAL DISPERSION IN RELATION TO SOCIAL BEHAVIOUR**—V. C. Wynne-Edwards—*Hafner Pub. Co.*, 653 p., illus., \$10.25. Presents evidence for the author's theory that the animal kingdom controls numbers and population density far above the starvation level by such "social" measures as territorial rights and social status.

**APPALACHIAN ELK**—B. F. Beebe—*McKay*, 149 p., illus. by James Ralph Johnson, \$3.25. Nature story for boys and girls.

**APPLIED PROGRAMED INSTRUCTION**—Stuart Margulies and Lewis D. Eigen—*Wiley*, 387 p., illus., \$6.95. Covers the field from a practical viewpoint, discussing cost, preparation time, available devices, utilization and student response data.

**BASIC ASTRONAUTICS: An Introduction to Space Science, Engineering and Medicine**—Frederick I. Ordway, III, James Patrick Gardner and Mitchell R. Sharpe, Jr.—*Prentice Hall*, 587 p., illus., \$16. Attempts integrated orientation to the whole field, stressing interrelationship of basic scientific and engineering disciplines.

**BEGINNER'S GUIDE TO ATTRACTING BIRDS**—

Leon A. Hausman—*Cornerstone Lib.*, 127 p., illus. by Jackson Miles Abbott and author, paper, \$1. Reprint (1951).

**THE BEHAVIOUR OF DOMESTIC ANIMALS**—E. S. E. Hafez—*Williams & Wilkins*, 619 p., illus., \$14.50. Summarizes the present state of knowledge of animal behavior, dealing with the fundamentals and with the behavior of specific mammals and birds.

**BIBLIOGRAPHY AND INDEX OF GEOLOGY EXCLUSIVE OF NORTH AMERICA, Vol. 25**—Marie Siegrist, Mary C. Grier and others—*Geological Soc. of Am.*, 753 p., \$17.50. Covers literature on the geology of South America, Europe, Asia, Africa, Australia and Iceland, published during 1960.

**BULLETIN OF MECHANICAL ENGINEERING EDUCATION, Vol. I, No. 1 (New Series)**, Jan.-June 1962—J. H. Lamble and J. Parker, Eds., with J. Johnson—*Pergamon*, 87 p., illus., paper, \$10 annually. On new experimental methods and demonstrations of fundamental value to mechanical engineering students.

**THE COMPLETE GUIDE TO ORBITING SATELLITES, Series 1: Communication, Weather, Navigation, Reconnaissance**—Arnold B. Mishkin, Ed.—*Space Products Corp.*, multipaged, illus., paper, \$2. Short resume of applications satellites.

**ELEMENTARY TECHNICAL MATHEMATICS**—Frank L. Juszli and Charles A. Rodgers—*Prentice-Hall*, 522 p., \$10.60. Author's approach is practical, making this text particularly suitable for engineering technicians.

**ENVIRONMENTAL ENGINEERING & METROPOLITAN PLANNING: Proceedings of the First Conference**—John A. Logan, Paul Oppermann and Norman E. Tucker, Eds.—*Northwestern Univ. Press*, 265 p., \$7.50. Papers and discussion of health, water supply, waste and pollution problems.

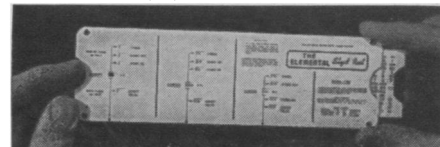
**ESSENTIALS OF RUSSIAN: Pronunciation, Conversation and Comprehension**—Andre von Gronicka and Helen Bates Jakobson—*Dover*, 46 p., paper, \$2.50; 12 inch long playing record, \$2.50; \$4.95 per set. Record-manual set designed to help the student and traveler understand spoken Russian.

**THE EXPERT DREAMERS**—Frederick Pohl, Ed.—*Doubleday*, 248 p., \$3.95. Sixteen science fiction stories written by scientists.

## LANGUAGES? Easy!

Listen & Learn. Only course designed for travel, everyday life. 3 12" records, full of practical phrases, English & language recorded. Full manual with record text, phonetic transcription. Separate sets: Spanish, French, German, Italian, Russian, Japanese, Portuguese, Greek. \$5.95 each. Money-back guarantee. Dept. SNL, Dover, 180 Varick St., N.Y. 14, N.Y.

## A MUST FOR CHEMISTRY & PHYSICS STUDENTS



The Elemental Slyd-Rul tells you, at a glance, symbol, weight, density, number, valences, color, melting and boiling point in °C for 98 elements. An ideal educational aid for science, physics and chemistry students. \$1 postpaid. Student rate: 12 or more, 75¢ ea. Money-back guarantee. Sorry, No C.O.D.'s.

**THE SLYD-RUL CO.**, 1040 West Broadway Woodmere, New York

**FRUITCAKE AND ARSENIC**—Josephine Hemphill—*Little*, 144 p., illus. by Marvin Friedman, \$3.95. Aimed to help young people know more about the work of the Food and Drug Administration, written by a former Dept. of Agriculture staff member.

**A GEOGRAPHY OF THE USSR: The Background to a Planned Economy**—J. P. Cole and F. C. German—*Butterworth*, 290 p., maps, \$8.50. Provides account of the USSR's economic geography at beginning of the 1959-65 Seven-Year Plan.

**HIGH IN THE THIN COLD AIR: The Story of the Himalayan Expedition**, led by Sir Edmund Hillary, sponsored by World Book Encyclopedia—Sir Edmund Hillary and Desmond Doig—*Doubleday*, 254 p., 88 photographs, \$6.95. Story of the mountaineering expedition that investigated the facts behind the Yeti legend.

**HIGHER EDUCATION, BASIC STUDENT CHARGES, 1961-62: Tuition and Fees, Board and Room**—W. Robert Bokelman and Louis A. D'Amico—*OE (GPO)*, 56 p., paper, 40¢.

**PENGUIN'S WAY**—Johanna Johnston—*Doubleday*, 45 p., illus. by Leonard Weisgard, \$2.50. Simply written and charmingly illustrated for the youngest readers.

**THE PHYSICAL WORLD OF LATE ANTIQUITY**—S. Sambursky—*Basic Bks*, 189 p., \$5.75. Describes the development of scientific conceptions and theories in the centuries following Aristotle until the sixth century A.D.

**REGENERATION**—R. Rasmont and others; Dorothea Rudnick, Ed.—*Ronald*, 272 p., illus., \$9. The Twentieth Growth Symposium of the Society for the Study of Development and Growth covered such subjects as maintenance of form in hydra, regeneration in the amphibian eye and morphogenesis in isolated fern leaves.

**RIDDLES OF SCIENCE**—Sir J. Arthur Thomson, rev. by Bernard Jaffe—*Fawcett*, 222 p., paper, 50¢. Probes such riddles as, why do we laugh or cry, what are enzymes, homing, and the cat's nine lives.

**SCOPE OF TOTAL ARCHITECTURE**—Walter Gropius—*Collier Bks*, 158 p., illus., paper, 95¢. Reprint, presents the idea of the "integrated structure", a fusion of art, technology and contemporary needs.

**SEVENTH AEC AIR CLEANING CONFERENCE at Brookhaven National Laboratory, Oct. 1961**—James M. Morgan, Jr., John D. Stevenson and Donald K. Jamison, Eds.—*AEC (OTS)*, 601 p., illus., paper, \$6.50. Papers and discussion of filter tests, removal of iodine, radioactive waste incinerators and similar projects.

**SKYWATCHERS: The U.S. Weather Bureau in Action**—William Bixby—*McKay*, 178 p., illus., \$3.50. Describes for the general reader the science of weather and the work of meteorologists.

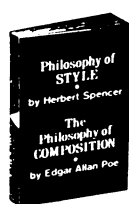
**THE SLAVS IN EUROPEAN HISTORY AND CIVILIZATION**—Francis Dvornik—*Rutgers Univ. Press*, 688 p., maps, \$15. Study of the role of the Slavic peoples during the medieval and early modern period of Eastern Europe, from the 13th century to the 19th.

**SONGBIRDS OF AMERICA: In Color, Sound and Story**—Recorded, photographed and written by Arthur A. Allen and Peter P. Kellogg, foreword by Roger Tory Peterson—*Cornell Univ. Records (Houghton)*, 28 p., 33 1/3 long-playing record, \$4.95. Seventh printing of popular album, illustrating 24 common species in sound and color.

## 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 CORP.**, Dept. D-4110, Fremont, Ohio



## WRITE FOR MONEY!

Enrich your style through Herbert Spencer's and Edgar Allan Poe's classic principles that have influenced many of the world's great authors. Indispensable for writers eager to get published! Send \$1.00 to PAGEANT PRESS, 101 5th AVE., N. Y. 3, Dept. SN.

## 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. 547-M  
251 W. 19th Street, New York 11

THE SOUTHERN APPALACHIAN REGION: A Survey—Thomas R. Ford, Ed.—*Univ. of Ky. Press*, 308 p., maps, \$10. Comprehensive reports on the region's population, economy, institutions and culture, revealing the existing imbalance between population and resource potential.

THE STRUCTURE OF SCIENTIFIC REVOLUTIONS—Thomas S. Kuhn—*Univ. of Chicago Press*, 172 p., paper, \$3. This Volume II, No. 2 of the International Encyclopedia of Unified Science presents in condensed and schematic form the author's view on the nature of accepted science theories, the emergence of scientific discoveries and the nature and necessity of scientific revolutions.

WESTWARD ON THE OREGON TRAIL—Marian T. Place with Earl Pomeroy—*Am. Heritage (Meredith Press)*, 153 p., illus., \$3.95. Colorful history, illustrated with paintings, prints and photographs of the period.

WHO LIVES AT THE SEASHORE? Animal Life Along the Shore—Glenn O. Blough—*Whittlesey House*, 48 p., illus. by Jeanne Bendick, \$2.95. Helps children explore the shore.

• Science News Letter, 82:244 October 13, 1962

#### RADIOLOGY

### Radiation Hazardous to Man Increases Dog's Life

► RADIATION above the maximum permissible levels can prolong life—but it's a dog's life at best.

Daily exposures, hazardous to man, have increased the longevity of beagles and improved their reproductive capabilities, two scientists reported at the Colorado State University symposium at Fort Collins on the effects of radiation on reproduction.

Dr. George W. Casarett of the University of Rochester's School of Medicine and Dentistry, N. Y., said his research on irradiation effects on 60 male beagles demonstrated that their death rate was half that of dogs in the control group which was not exposed to radiation. He suggested that continued radiation may reduce incidence of death from infectious diseases by raising the white blood cell count. White blood cells act as disease combatants.

The beagles receiving double the maximum radiation exposures to which humans are limited seem to maintain better reproductive capabilities, Dr. Casarett said.

The ovaries of the female beagle appear to be radiation-resistant, according to Dr. A. C. Andersen of the University of California's School of Veterinary Medicine.

"No form of partial or complete sterilization from whole-body x-irradiation has become apparent in ten years of continuous research with one colony of dogs," he said. Dogs used were exposed to sub-lethal doses, hundreds of times more than the yearly permissible dose for humans. Such acute exposure did cause accelerated aging and cancer, with resultant shortening of the life span, but it had no effect on reproduction, Dr. Andersen said.

At the same meeting, Dr. Roberts Rugh of Columbia University's radiology department warned that findings from radiation of experimental animals cannot be applied to similar X-ray exposure to reproductive organs of the human female.

"For rodents and non-anthropoid animals in general it is of interest to learn the effect of ionizing radiations on the reproductive

capacity. But for humans, quality as well as capacity of reproduction must be considered."

Dr. Rugh's warning is particularly significant since the studies of dogs, under-

taken by Dr. Casarett, were aimed at determining the safety factors in levels of environmental radiation at which persons may work without risking bodily harm.

• Science News Letter, 82:245 October 13, 1962

## Where to Retire or Vacation

at what look like prewar prices—and where no one ever heard of nerves or worries

### These Are America's Own Bargain Paradises

In *Off-the-Beaten Path*, the latest book by Norman Ford, you read of island paradises aplenty in the United States and Canada, of art colonies (artists search for picturesque locations where costs are low!), of areas with almost a perfect climate or with flowers on every side.

Here, too, are the real U.S.A.-brand Shangri-Las made for the man or woman who's had enough of crowds. Here, too, are unspoiled seashore villages, tropics like islands, and dozens of other spots just about perfect for your retirement or vacation at some of the lowest prices you've heard of since the gone-forever prewar days. And for good measure you also read about the low-cost paradises in Hawaii, the Virgin Islands, and Puerto Rico.

You can be sure that *Off-the-Beaten Path* names the low-cost Florida retirement and vacationing towns, the best values in Texas, the Southwest, California, the South and East, Canada—and a dozen other areas which the crowds have not yet discovered:

- That undiscovered region where winters are as warm as Miami Beach's yet costs can be two-thirds less.
- That island that looks like Hawaii yet is 2000 miles nearer (no expensive sea or air trip to get there).
- France's only remaining outpost in this part of the world—completely surrounded by Canadian territory . . . or a village more Scottish than Scotland or age-old Spanish hamlets right in our own U.S. where no one ever heard of nervous tension or the worries of a modern day life.
- That remarkable town where a fee of 3¢ a day gives you an almost endless round of barbecues, musicals, concerts, picnics, pot luck suppers, smorgasbord dinners, and a fine arts program.

*Off-the-Beaten Path* is a big book filled with facts that open the way to a different kind of retirement or vacation made all the more attractive by the rock-bottom prices. About 100,000 words and plenty of pictures. Yet it costs only \$2.

## FABULOUS MEXICO where everything costs less

### The land of retirement and vacation bargains—that's Mexico

Where you can build a modern home for \$4,500 and an American retirement income looks like a fortune. It's the land where your vacation money can buy double or more what it might back home—provided you know where to go for Mexico's best values.

Norman Ford's big book MEXICO—WHERE EVERYTHING COSTS LESS tells you exactly where to get all of this country's best vacation and retirement values, where you can live like a prince on what you might just get along on in the U.S.A.

Norman Ford knows Mexico from north to south, from east to west, and he takes you to vacation and retirement areas that look more like the South Seas than Tahiti itself; to whole sections of just perfect weather where it's like June all year round; plus resort after resort, towns, cities, spas, and what not else where you'll have a vacation to remember at a cost so low it could seem unbelievable.

If you want a delightful retirement area with plenty of Americans around to talk to, he leads you to all the principal retirement towns, as well as dozens of little known, perhaps even more delightful areas, where costs are way far down, there's plenty to do and meeting people is easy. Always, he shows you modern, flower-bedecked hotels and inns that charge hardly half of what you might expect to spend in even such a land of vacation and retirement bargains as Mexico.

There's a great deal more besides: everything from exploring ancient pyramids as old as Egypt's to finding fabulous hunting and fishing. If you might want to share in the high interest rates Mexican banks pay or to buy equally high-earning real estate or start a business of your own, this detailed guide to a fabulous land tells you what you must do to start your money earning so much more than in the U.S.

MEXICO—WHERE EVERYTHING COSTS LESS opens up Mexico to you. It's a big book, yet it costs only \$1.50. So send for yours today.

## 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 West Indies or along the St. Lawrence River to French Canada. In fact, trips to almost anywhere 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 elsewhere. 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 new 110-page 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 fill out coupon.

Mail to HARIAN PUBLICATIONS, 16 Spring Street  
GREENLAWN (Long Island), New York

I have enclosed \$..... (cash, check, or money order). Please send me the books checked below. YOU WILL REFUND MY MONEY IF I AM NOT SATISFIED.

- Off-the-Beaten Path*—America's own Bargain Paradises. \$2.  
 *Fabulous Mexico*—where everything costs less. \$1.50.  
 *Travel Routes Around the World* (where to travel by freighter). \$1.  
 SPECIAL OFFER: All 3 books above for \$3.

Print name .....

Address .....

City, Zone #  
& State .....