


BUSY ANTS FOR YOU!



SCIENCE STUDY
Exciting! Educational! Fascinating!

Ants . . . the world's tiniest and busiest engineers. Now get a real inside look into the ant world. Watch them dig tunnels . . . see them build rooms . . . marvel as they erect bridges and move mountains before your very eyes. Have fun spotting the ant soldiers . . . the laborers . . . the engineers. Ideal for the home, school, office, laboratory. Scientifically designed escapeproof, unbreakable clear plastic Ant Farm. Large 6" x 9" size with sturdy stand. Includes country homestead with barn, silo, windmill, trees and barnyard where ants can work and play. Easy to maintain. Just add a little sugar and water. Free Ant Manual! Guaranteed live ants with certificate. You can't afford to miss this investment in science. Mail only \$2.98 plus 25 cents postage to: ANT HOUSE, P.O. Box 264, Camp Hill, Pa.

USED ELECTRIC GENERATOR
Cost Over \$20.00 New; While They Last, \$3.95



Generates Up to 75 volts. Use to generate electricity, ring bells, light up lights, as a medical battery, shocker, many electrical experiments, classroom uses, etc. Hand crank or gear wheel drive. Each has 3 or 4 five-inch 1-lb. bar magnets (alone worth more than total cost), generating armature, wire leads, gear crank, ready for use. Originally used in crank phones. Complete unit weighs over 5 lbs. Each Postpaid \$3.95. Johnson Smith Co., Dept. 644 Detroit 7, Michigan

A MATH COURSE THAT FIGURES!

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 *fastest* 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 source 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. 329-L
251 W. 19th Street, New York 11

Books of the Week

For the editorial information of our readers, books received for review since last week's issue 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. Request free publications direct from publisher, not from Science Service.

THE ANCIENT LIBRARY OF QUMRAN AND MODERN BIBLICAL STUDIES—Frank Moore Cross, Jr.—*Doubleday*, 196 p., illus., \$4.50. Telling the story of the discovery of the famous Dead Sea Scrolls and explaining their meaning. By a leading scholar in the field.

ANIMAL TAILS—George F. Mason—*Morrow*, 95 p., illus. with drawings by the author, \$2.50. Telling young people some interesting and little known facts about animal tails.

ARTIFICIAL AND NATURAL PRODUCTION OF SILVER SALMON, *Oncorhynchus kisutch*, AT MINTER CREEK, WASHINGTON — Ernest O. Salo and William H. Bayliff — *State of Washington Department of Fisheries*, Research Bulletin No. 4, 80 p., illus., paper, free upon request direct to publisher, 4015 20th Ave., West, Seattle 99, Wash. Comparing the merits of hatchery versus natural rearing.

THE BOOK OF KNOWLEDGE 1958 ANNUAL—Louise McDowell, Ed.—*The Grolier Society*, 420 p., illus., \$7.50. Reviewing important events of the crowded year 1957 for family reading and including special feature articles.

CARDIOVASCULAR REHABILITATION—Paul Dudley White, Howard A. Rusk, Bryan Williams and Philip R. Lee, Eds.—*McGraw-Hill*, 155 p., \$6.50. Based on papers presented at a symposium in May, 1956.

A DAY IN THE LIFE OF A SUPERSONIC PROJECT OFFICER—Lloyd Mallan—*McKay*, 178 p., illus. with photographs by the author, \$3.95. The beautiful photographs with which this book is filled were the cream selected from more than 4,500 film negatives.

EDUCATION FOR THE GIFTED: The Fifty-Seventh Yearbook of the National Society for the Study of Education, Part II—Nelson B. Henry, Ed.—*Univ. of Chicago Press*, 420 p., \$4. It is expected, the editor indicates, that this yearbook will stimulate further advances in the improvement of educational opportunities for superior students.

ELECTRICAL PHENOMENA AND SOLID/LIQUID INTERFACE: Proceedings of the Second International Congress of Surface Activity, Volume III—J. H. Schulman, Ed.—*Academic*, 621 p., illus., \$16.80 this volume, \$50 for set of four volumes.

FEEDBACK THEORY AND ITS APPLICATIONS—P. H. Hammond—*Macmillan*, 348 p., illus., \$7. For post-graduate engineering and physics students.

THE FIRST BOOK OF THE PANAMA CANAL—Patricia Maloney Markun—*Watts, F.*, 61 p., illus. with drawings by Lili Réthi, \$1.95. A book for children about the building of the canal and some of its important engineering features.

FUNDAMENTAL CONCEPTS OF INORGANIC CHEMISTRY—Esmarch S. Gilreath—*McGraw-Hill*, 421 p., illus., \$7.50. Text for advanced undergraduates.

THE GARDEN OF CHAPARRAL: Plants of the Lower Rio Grande Valley—Elizabeth M. Riess—*Vantage*, 158 p., illus., \$3. An artist writes

LITTLE GIANT PRISM

HARRY ROSS

Suitable for many optical experiments & for use with W.F. low-power telescopes. 2"x2", aluminized on the hypotenuse. ½ lb. of best white optical crown glass. Slight imperfections will not affect efficiency for most uses. Only \$1.00 plus 45¢ postage. Scientific & Lab Apparatus 61 Reade St., N. Y. 7, N. Y.

charmingly of flowers and leaves that enchanted her and the folklore associated with them.

GAS/LIQUID AND LIQUID/LIQUID INTERFACE: Proceedings of the Second International Congress of Surface Activity, Volume 1—J. H. Schulman, Ed.—*Academic*, 521 p., illus., \$15 this volume, \$50 for set of four volumes.

GOVERNMENT-UNIVERSITY RELATIONSHIPS IN FEDERALLY SPONSORED SCIENTIFIC RESEARCH AND DEVELOPMENT—*Govt. Printing Office*, National Science Foundation, 44 p., graphs, paper, 40¢. Describing the evolution of Federal sponsorship of research and development at colleges and universities.

A GUIDE TO ENGINEERING EDUCATION—Frank W. Eller—*Teachers College*, Science Manpower Project Monograph, 45 p., paper, \$1. To help high-school students and teachers find out who is qualified for careers in engineering.

I LIKE CATERPILLARS—Gladys Conklin—*Holiday House*, illus. with color drawings by Barbara Latham, \$2.75. For little children.

JET PLANES WORK LIKE THIS—John W. R. Taylor—*Roy*, 63 p., illus., \$2.75. For young people.

LANDING GEAR DESIGN—H. G. Conway—*Chapman (Macmillan)*, 342 p., illus., \$12. For aeronautical engineers and students.

NUCLEAR RADIATION DETECTION—William J. Price—*McGraw-Hill*, 382 p., illus., \$9. Gathering together the basic information on all the important nuclear-radiation detectors in use today.

NUCLEAR STRUCTURE—Leonard Eisenbud and Eugene P. Wigner—*Princeton Univ. Press*, 128 p., \$4. A short descriptive summary. The treatment is largely non-mathematical.

PHARMACOLOGY IN MEDICINE: A Collaborative Textbook—Victor A. Drill, Ed.—*McGraw-Hill*, 2d ed., 1273 p., illus., \$19.50. Recounting the desirable therapeutic actions, side effects and toxicity of new drugs as well as many of the older ones.

QUALITATIVE ANALYSIS: An Introduction to Equilibrium and Solution Chemistry—Therald Moeller—*McGraw-Hill*, 550 p., illus., \$6.50. Intended to lead the student logically through needed theoretical concepts while simultaneously providing a background of interesting experimental work.

REACTOR CORE MATERIALS: A Review of Recent Developments in Solid Materials for Reactor Cores, Volume 1, Number 1—Batelle Memorial Institute—*Govt. Printing Office*, Atomic Energy Commission, 40 p., illus., paper, 55¢ per single copy, \$2 per year. A quarterly for those who wish to keep abreast of developments in this field.

RUSSIAN-ENGLISH GLOSSARY OF ACOUSTICS AND ULTRASONICS—P. Robeson, Jr.—*Consultants Bureau*, 193 p., paper, \$10. Containing over 10,000 terms in these fields and also the English method of writing the names of scientists.

SCIENCE NEWS 47—Archie and Nan Clow, Eds.—*Penguin*, 141 p., illus., paper, 65¢. Containing articles of current scientific interest.

SOLID/GAS INTERFACE: Proceedings of the Second International Congress of Surface Activity, Volume II—J. H. Schulman, Ed.—*Academic*, 348 p., illus., \$12.60 this volume, \$50 for set of four volumes.

SOLID/LIQUID INTERFACE (WASHINGS, ETC.) AND CELL/WATER INTERFACE: Proceedings of the Second International Congress of Surface Activity, Volume IV—J. H. Schulmann, Ed.—

Academic, 352 p., illus., \$12.60 this volume, \$50 for set of four volumes.

SYMPOSIUM ON RADIOISOTOPES—Charles E. Crompton and others—*Am. Soc. for Testing Materials*, 94 p., illus., \$2.75. Use of radioisotopes in industry is saving hundreds of millions of dollars each year.

THERMODYNAMICS—Enrico Fermi—*Dover*, 160 p., paper, \$1.75. Unabridged, unaltered reproduction of the 1937 edition of this modern classic.

TOPICS IN MICROBIAL CHEMISTRY: Antimycin, Coenzyme A, Kinetin and Kinins—F. M. Strong—*Wiley*, 166 p., illus., \$5. Presenting a "capsule view" of several individual research projects.

VIBRATION CONTROL—John N. Macduff and John R. Curreri—*McGraw-Hill*, 465 p., illus., \$9. Text for students of machine design.

WIND ATLAS OF THE NORTH PACIFIC—James W. McGary and Thomas M. Naito—*U. S. Fish and Wildlife Service*, Special Scientific Report—Fisheries No. 243, 35 p., illus., paper, free upon request direct to publisher, Washington 25, D. C. Wind is important to the fisherman because no matter how abundant the fish a good catch cannot be obtained when wind and water are adverse.

THE WORLD OF ENGINEERING—Frank Ross, Jr.—*Lothrop*, 186 p., illus., \$3. Information for the young person who wants to know whether he should go into this profession.

Science News Letter, April 19, 1958

ICHTHYOLOGY

Deep-Swimming Whales Tangle With Cables

➤ WHEN A WHALE and submarine cable meet, the tangled, knotty results may spell disaster for the whale and broken communications for the telegraph company. However, they can also mean additional information for scientists on how deep a dive a whale can make.

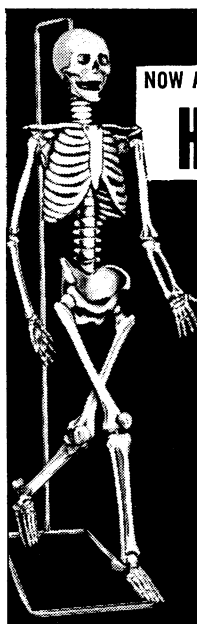
A study of 14 cases of whales entangled in submarine cable lines shows that whales can withstand pressures at close to four-fifths of a mile down. Six of the reports describe finding whale carcasses or remains entangled in cable brought up from about 3,000 feet. The maximum depth mentioned is 3,720 feet. All whales positively identified were sperm whales.

Apparently the whales swim at these great depths in search of food. As they move through the water, jaws open and plowing through food-containing sediment on the ocean floor, the animals run the risk of collision with a cable. It also is possible whales attack slack cable, mistaking it for food.

Bruce C. Heezen, Lamont Geological Observatory, Palisades, N. Y., who reports on his study in the British journal *Deep-Sea Research*, says there is little doubt that whales caused the damage to cables. The way the cables were obviously mauled, the correlation between first reports of cable failure and the state of decomposition of the whale's body, and other factors such as location, depth and ocean currents all point to whales as the culprits.

Reports of whale entanglements off the coasts of Ecuador and Peru in March may be more evidence of the seasonal migration of sperm whales, Mr. Heezen says.

Science News Letter, April 19, 1958



Thousands of this very same de luxe medical display model, sold for \$10!

NOW AVAILABLE FOR THE FIRST TIME COMPLETE WITH STAND

HUMAN SKELETON MODEL

ONE FOOT HIGH • DE LUXE KIT . . . ONLY

- Ideal for Students, Doctors, Hospitals, Lawyers, Insurance Men, Nurses, Artists, Hobbyists, etc.
- Anatomically Authentic—Precise Contours and Proportions. Articulated!
- Accurately Scaled to 1/6 of 6 Ft. Male. Without stand, etc. \$1.98
- Fully Detailed, Bone-Like, Unbreakable Construction.
- A Fascinating, Educational Display Piece on Desk or Mantel.
- A Real "Stopper" in Store or Car Window.

\$298

The original model praised by medical schools, doctors, scientists . . . at a sensational low price! Perfect for doctor's office, courtroom demonstration, school library . . . a striking display and conversation piece for business, club or den. Interlocking parts assemble in seconds, hang securely from exclusive specially designed metal stand. Complete with instructions and anatomical chart. A never-to-be-forgotten gift. ORDER TODAY!

Guaranteed to be one skeleton that won't be hidden in the closet, or money back.

ORDER BY MAIL NOW • Enclose check or Money Order (Please add 25¢ for postage and handling)

DAMAR'S 75-D DAMAR BLDG., Elizabeth, N. J.

Surprise

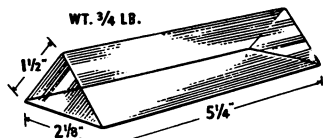
Is expressed by many chemists when they find they can obtain 10 stainless steel weighing dishes all the same weight (to 1 mg.). Any dish a tare for all others in a set. Write for Leaflet SSWD/SNL.

R. P. Cargille Laboratories, Inc.
117 Liberty St. New York 6, N.Y.

Best Book Contest for 1958

\$1600 Cash Awards plus 40% royalty. All types of manuscripts invited. For Contest rules and details of famous publishing plan, write for free Brochure SN Pageant Press, 101 Fifth Ave., N. Y. 3

PRISMS \$1.50



Made for U. S. govt. for tank periscopes. Fine optically ground, big precision prisms with silvered base. Terrific for all types of spectrographic work, in homemade telescopes & other optical systems for bending rays. Makes unusual paper weight (paint your name on it) or conversation piece for mantel. You'll find many other uses. NEW, PERFECT! Cost U. S. govt. \$25 ea. NOW—\$1.50 ea. ppd. or 4 for \$5.00
VOLUME SALES CO.
War Assets Div., Dept. L19
3930 Sunset Blvd. Los Angeles 29, Calif.

NOW—There's a New RELAXED WAY TO LEARN ANY LANGUAGE

At Home—almost overnight
RELAX like a child . . . SPEAK like a native . . . almost overnight. Find out about the Linguaphone Scientific Shortcut. FREE BOOK with fascinating details. Mail coupon today or Call—Free of obligation.

34 LANGUAGES by LINGUAPHONE
World's Standard Conversational Method
AT HOME—ABROAD
For Business, Travel, Culture

LINGUAPHONE INSTITUTE

Dept. 31-048 Radio City, N. Y. 20 CI 7-0829
Please send me FREE book on languages—no obligation.

Name

Address

City..... Zone..... State.....

Please check your language interest:

Spanish (American) Spanish (European)

French Italian German Russian

Modern Greek Japanese Icelandic

Other

FANTABULOUS BUY!
EASTMAN 1/25-7 INCH AERO EKTAR LENS
Orig. Cost Gov't approx. \$200.00
Never before such a bargain . . . was originally designed for use in the K-21 and K-24 aerial cameras. Has 178mm focal length with f-stops from f/2.5 to f/16. Has been used to photograph Comets - could possibly be used to photograph Satellites, etc. Ideal for night or poor light conditions due to tremendous light gathering power. Will work equally well with Black & White or Color Film. Can be adapted to 35mm or Speed Graphic Cameras as a telephoto lens.
2995 USED BUT EXCELLENT 4995 NEW

NEW MICROSCOPE
60 to 450 POWER
with ILLUMINATED SUB-STAGE MIRROR and TRIPLE TURRET
NOW 1095 HAS 60, 120, 150, 180, 300 INCLUDING 8 P.C. DISSECT SET and 450 POWER MAGNIFICATION
Ideal for use by Amateur Scientist, Student, etc. in Home Laboratory for study of plant and insect life, microbes, blood cells, etc.
This wonderful Microscope Bargain will fill your every need. Has precision ground and polished lenses. Two eyepieces of 6X and 15X that are interchangeable. Revolving turret has three lenses of 10X, 20X and 30X magnification. Patented sub-stage mirror has self-contained light to illuminate your slide. Body is all-metal and will incline 90°. Comes complete with fitted wood case and 3 slides. . . plus FREE dissecting set described below . . .
FREE WITH MICROSCOPE
8-PIECE DISSECTING SET. Has scalpel, six slides, Magnifying glass, Tweezers, Scissors, etc.

WORLD'S MOST AMAZING CATALOG
The LARGEST COLLECTION OF BARGAINS ever assembled in one catalog!
396 PAGES
Nationally Advertised Merchandise • New and Used Gov't Surplus • Factory Close-outs • Exciting Imports! FROM EVERYWHERE Palley's brings you items of every description at unbelievably LOW PRICES! Order your copy today!
Send 50c (for handling & mailing) Your 50c will be refunded with 10% your first order of \$1.00 or more.
TO ORDER: Send check, or M.O. 1/2 deposit with C.O.D.'s. Prices F.O.B., Los Angeles, Calif.
Palley's 2283 E. Vernon Ave., Dept. N-48, Los Angeles 58, Calif.