

Books of the Week

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AUTOMOBILE WORKERS AND THE AMERICAN DREAM—Ely Chinoy, introd. by David Riesman—Beacon Press, 139 p., paper, \$1.65. Reprint (1955)

THE BIOLOGY OF THE ALGAE—F. E. Round—St. Martins, 269 p., illus., \$7.25. A general, scholarly account of the role played by algae in their natural environments, shows how they have been extensively used to elucidate basic biochemical and physiological problems.

THE BOOK OF TREES—William Carey Grimm—Stackpole Co., 493 p., illus., \$7.95. An aid to the study and identification of more than 250 trees common in the eastern United States.

CHEMISTRY—E. Russell Hardwick—Blaisdell Pub. Co., 303 p., illus., \$7.50. A fundamental course for non-majors.

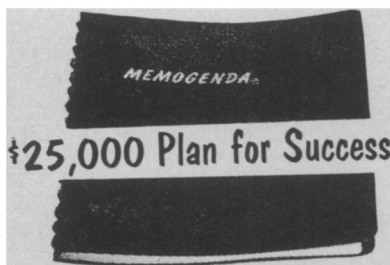
THE FABRIC OF THE HEAVENS: The Development of Astronomy and Dynamics—Stephen Toulmin and June Goodfield—Harper, 285 p., illus., paper, \$1.95. Reprint (1961).

FIREFLIES: In Nature and the Laboratory—Lynn and Gray Poole—Crowell, 149 p., illus., by Christine Sapielha, \$3.95. Tells young people how the firefly and other bioluminescent organisms serve scientific investigations.

THE GEOGRAPHY OF EVOLUTION: Collected Essays—George Gaylord Simpson—Chilton Bks., 249 p., illus., \$5.50. Essays on the origin and development of animal life, in particular on the relationship of that development to the geography of our planet, explaining the continental and island formations in the evolutionary process.

GROWING UP IN THE KIBBUTZ—A. I. Rabin—Springer Pub. Co., 230 p., \$5; paper, \$2.95. Comparison of the personality of children brought up in the Kibbutz and of family-reared children.

THE HALF WORLD OF AMERICAN CULTURE: A Miscellany—Carl Bode, preface by C. P. Snow—Southern Ill. Univ. Press, 259 p., \$5.50. An exploration of American literature and culture, including the motivations of writers and readers of best sellers.



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HEATH SCIENCE SERIES, Book 5: Science in Our World, Book 6: Science for Today and Tomorrow—Herman and Nina Schneider—Heath, 3rd ed., 585 p., 594 p., illus., \$3.48, \$3.68. Up-to-date science texts for the intermediate grades, stressing experiment and examination.

HERBAL—Joseph Wood Krutch—Putnam, 255 p., 105 plates, \$17.50; after 1/1/66, \$20. Very handsome volume, with information facing full-page woodcuts from a 16th century folio.

HISTORICAL GEOLOGY—A. O. Woodford—Freeman, 512 p., illus., \$9.50. Text considers the major discoveries of historical geology and attempts to give the reasons for the scientific conclusions drawn.

THE IDENTITY OF MAN—J. Bronowski—Natural Hist. Press (Doubleday), 107 p., \$3.95. Four essays about the impact of science on man's values and behavior.

INDUSTRIAL RESEARCH LABORATORIES OF THE UNITED STATES—William W. Buchanan, Ed.—Bowker Associates, 12th ed., 746 p., \$25. Compilation of companies with research and development facilities, includes information on divisional research of the large corporations, geographical and personnel index.

INTRODUCTION TO LOGIC AND SETS—Robert R. Christian—Blaisdell Pub. Co., 2nd ed., 116 p., diagrams, paper, \$1.75. Emphasis is on language and notation rather than on theories.

JAMESTOWN: First English Colony—Marshall W. Fishwick, American Heritage Eds. with Parke Rouse, Jr., Cons.—Am. Heritage (Harper), 154 p., illus., \$3.95. Early American history for young people.

LABORATORY CHEMISTRY—Therald Moeller and Dean F. Martin—Heath, 279 p., illus., paper, \$4.50. Designed for a year's course that includes elements of both qualitative and quantitative analysis, presented in a logical progression of experiments.

LABORATORY PHYSICS—Russell B. Hastings—Bruce Pub. Co., 316 p., illus., \$7.50. Collection of 186 experiments in elementary and advanced general college physics, designed to cover two years' laboratory work.

LIGHTHOUSE OF THE SKIES: The Smithsonian Astrophysical Observatory, Background and History, 1846-1955—Bessie Zaban Jones—Smithsonian Institution, 339 p., 17 plates, \$5. Recounts in detail not only the development of the Observatory but the development of the science of astrophysics itself and of the relationships between government and science.

THE MENACE OF PEP PILLS—Warren Smith and Eugene Olson—Merit Bks. (Camera Arts), 128 p., paper, 75¢. Some facts about the illegal use of goof balls and pep pills in our society.

MONARCH BUTTERFLIES—Alice L. Hopf—Crowell, 134 p., illus. by Peter Burchard, \$3.75.

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SCIENCE NEWS LETTER

1723 N Street, N.W., Washington, D. C. 20036

Shows young readers how to treat the migrating butterfly as an interesting subject for investigation.

THE MYSTERY OF MATTER: Prepared by American Foundation for Continuing Education—Louise B. Young, Ed.—Oxford Univ. Press, 712 p., illus., \$10. Articles by eminent scientists and authors from the principal works in the history of scientific literature, with emphasis on more recent research.

THE NATURAL HISTORY OF MOSQUITOES—Marston Bates—Harper, 378 p., paper, illus., \$2.45. Reprint (1949) of study of mosquito behavior made in a small Colombian town east of the Andes.

THE NATURE OF SOLIDS—Alan Holden—Columbia Univ. Press, 241 p., illus., \$6.95. Explains the field of solid-state physics to the intelligent layman or engineer without background in the subject.

NON-HEME IRON PROTEINS: Role in Energy Conversion—Anthony San Pietro, Ed.—Antioch Press, 473 p., illus., \$12.50. Formal papers and discussions presented during 1965 symposium sponsored by the Charles F. Kettering Research Laboratory.

NUCLEAR STRUCTURE AND ELECTROMAGNETIC INTERACTIONS: Scottish Universities' Summer School 1964—N. MacDonald, Ed.—Plenum Press, 510 p., illus., \$22.50. Studies of experimental methods and results in the field of electromagnetic and photonic processes, and interpretations of these phenomena in terms of modern theoretical concepts.

OPEN THE SKY: An Anthology of the Literature of Flight—Enid M. Quitenden, Ed.—Pergamon Press, 203 p., paper, \$2.45. Selected readings on pioneers, pilots, skyways, cloudscape, war and space.

THE PENGUIN DICTIONARY OF ENGLISH—Compiled by G. N. Garmosway with Jacqueline Simpson—Penguin Bks., 800 p., paper, \$1.95. Up-to-date guide to modern English—American and international usage, contains more than 45,000 entries.

THE PHYSICS OF ICE—E. R. Pounder—Pergamon Press, 151 p., illus., paper, \$2.95. Outlines the present state of knowledge regarding the structure and properties of ice.

PLANT INDICATORS OF SOILS, ROCKS AND SUBSURFACE WATERS—A. G. Chikishev, Ed., transl. from Russian—Consultants, 210 p., illus., \$27.50. Research papers concerned with botanical and ecological patterns as sensitive indicators of subsurface rock strata, water table, mineral deposits and soils.

THE POLICY SCIENCES—Daniel Lerner and Harold D. Lasswell, Eds.—Stanford Univ. Press, 344 p., paper, \$2.95. Originally published in 1951, makes available significant surveys of the new conceptions and methodology of those special fields which contribute to an understanding of human relations and social actions.

PROCEEDINGS OF THE FEDERAL INTER-AGENCY SEDIMENTATION CONFERENCE 1963—A. L. Cochran, Chmn.—USDA (GPO), 933 p., illus., maps, \$5.75. Working conference papers discussing sedimentation problems and methods used in their investigation and solution.

THE PSYCHO-BIOLOGY OF LANGUAGE: An Introduction to Dynamic Philology—George Kingsley Zipf, introd. by George A. Miller—M.I.T. Press, 336 p., diagrams, paper, \$2.95. Presents the findings of an extensive study of speech as a natural phenomenon by statistically treating speech as a specific form of behavior in a unique species.

THE QUESTIONERS: Physicists and the Quantum Theory—Barbara Lovett Cline—Crowell, 274 p., photographs, \$5. Based on the physicists' own accounts of their work and the reminiscences of those who worked with them.

RANGER VII PHOTOGRAPHS OF THE MOON, Part III: Camera 'P' Series—Jet Propulsion Laboratory, Calif. Inst. of Technology—NASA (GPO), 200 plates, 27 p. text, paper, \$6.50. Shows in sequence 758 of the more than 3,900 photographs taken with the four partial-scan P cameras.

REFERENCE ELECTRODES FOR THE FUSED SALTS—A. F. Alabyshev, and others, transl. from Russian by Adam Peiperl—Sigma Press, 184 p., illus., \$8. Monograph on the design, theory of operation and areas of application of reference electrodes for fused electrolytes.

RESEARCH IN MOLECULAR SPECTROSCOPY—D. V. Skobel'tsyn, Ed., transl. from Russian—Consultants, 205 p., illus., paper, \$22.50. Includes investigation of methods correcting instrument distortions in infrared spectroscopy, and study of the effect of temperature on Raman spectra.

RUSSIA AND THE CHOLERA, 1823-1832—Roderick E. McGrew—Univ. of Wis. Press, 229 p., maps, \$6. Annotated chronicle of the events, with examination of the sociological and political implications of the epidemic for Tsarist Russia.

SAMBA AND THE MONKEY MIND—Leonard Williams—Norton, 146 p., 63 plates, \$4.50. The appealing story of a ten-year association with woolly monkeys from the Amazon living in an annex to the home of a human family.

SCIENCE EXPERIMENTS WITH WATER—Sam Rosenfeld—Harvey House, 190 p., photographs, illus. by John J. Floherty, Jr., \$5. Among typical problems discussed and tested are how a steel ship floats and what makes a submarine rise, self-test questions and answers follow each discussion.

THE STUDENT AND THE NEW MATH: For Elementary School Parents and Others—Jerome T. Murray—Regnery, 164 p., diagrams, \$4.95. Simple progression from kindergarten to fourth grade.

THE TALL VOYAGERS: The Story of Barney Burnett—Claire Rankin—Ward Ritchie (Lane Bk. Co.), 224 p., photographs, \$6.95. Recalls the era of the great sailing vessels.

TARGET ARCTIC: Men in the Skies at the Top of the World—George Simmons—Chilton Bks., 420 p., illus., maps, \$7.50. The story of the aerial pioneers in the Arctic, based on recorded facts from 1897 to the present, includes chronologies, charts of drifting stations, bibliography and detailed index.

THEY TURNED TO STONE: Julian May—Holiday House, 40 p., illus. by Jean Zallinger, \$3.50. Shows children the way fossils were formed and where to look for them.

THE THIRD BOOK OF EXPERIMENTS—Leonard de Vries, transl. from Dutch by Eric G. Breeze—Macmillan, 104 p., illus. by Joost van de Woestijne, \$3.95. Entertaining experiments for young boys and girls, with scientific principles explained.

THIS IS ANTARCTICA—Joseph M. Duckert—Coward-McCann, 191 p., photographs, maps, \$3.95. An account of Antarctic exploration for young people, from early expeditions to life at McMurdo Station, today's "boom town" in the Antarctic.

THE TISSUES OF THE BODY—W. E. LeGros Clark—Oxford Univ. Press, 5th ed., 423 p., illus., \$16.50. Updated text combines a record of elementary knowledge with short discussions of recent advances in certain aspects of tissue structure and function.

TRAFFIC CONTROL: Theory and Instrumentation—Thomas R. Horton, Ed., foreword by Henry A. Barnes—Plenum Press, 218 p., illus. \$12.50. Advanced thinking in traffic engineering and case studies

of large-scale integrated traffic control systems.

TRANSLATION OF THOMAS JAEGER'S PRINCIPLES OF RADIATION PROTECTION ENGINEERING—Lawrence Dresner—McGraw, 451 p., illus., \$15. A thorough introductory survey of the field and a discussion of the diverse contributions to the technology of radiation protection.

ULTRASONICS IN THE CHEMICAL INDUSTRY—Vladimir Andreevich Nosov, transl. from Russian by J. E. S. Bradley—Consultants, 164 p., diagrams, paper, \$25. Vol. 2 of Soviet Progress in Applied Ultrasonics, deals with instruments for monitoring and analysis in chemical technology.

UNDERSTANDING ANIMALS—Gerhard Gronefeld, transl. from German by Gwynne Vevers and Winwood Reade—Viking Press, 319 p., photographs by author, \$7.95. Unusually fine close-ups of animal life in national parks, zoos, laboratories and circuses.

VOICES FROM THE SKY: Previews of the Coming Space Age—Arthur C. Clarke—Harper, 243 p., \$3.95. Stimulating reading, with subject matter ranging "beyond Centurus" to memoirs of a retired armchair astronaut.

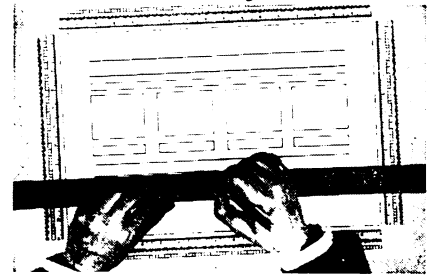
VOICES IN THE CLASSROOM: Public Schools and Public Attitudes—Peter Schrag—Beacon Press, 202 p., \$5.95. A journalist's attempt to examine a variety of American schools and communities, each with its own social and regional characteristics.

WEEDS OF THE NORTHERN UNITED STATES AND CANADA—F. H. Montgomery—Wame, 226 p., line drawings, \$3.95. Botanical field guide with general key for identification.

YOUNG EAGLE—Berniece Freschet—Scribner, unpagged, illus. by James Alexander, \$3.25. Acquaints young readers with the habits of the Golden Eagle.

• Science News Letter, 88:300 November 6, 1965

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INVENTION

Current U. S. Patents

► **ALUMINUM**, that peculiarly useful soft metal, has found one more application. It has been developed into what is claimed to be the first stretchable metal fabric.

Inventor Thomas E. Lohr of Detroit, Mich., received patent 3,213,168 for his process. He assigned rights to General Motors Corporation.

Mr. Lohr claims a way of making metallic material that breathes, stretches and wears.

In structure, the material resembles paper. In the process, liquid rubber is spread into a thin layer over a sheet of Teflon. The Teflon sheet is vibrated, and the rubber forms into small globules.

Short aluminum fibers are then sprayed into a random pattern over the closely spaced globules. When this is heated the rubber cures into elastic particles thus forming a fabric.

The one disadvantage of any metal material for use, such as in car seat covers, is that after it has been heated a bit by the sun it can scorch the seat of the driver's pants. General Motors has not yet decided to use the material for metal seat covers, but it is believed that the fabric will have utility elsewhere, such as in upholstery for office furniture.

Brussels Sprouts Stripper

A friction machine has been designed to strip a new heavy stalked variety of brussels sprouts known as "Jade." Since all blossoms of this new type mature at the same time, sprouts and stalk can be completely separated and immediately sped to the freezing plant, according to inventor Nathan Hagopian of Fresno, Calif. Mr. Hagopian assigned right to patent 3,212,506 to Commercial Manufacturing & Supply Co., Fresno, Calif.

Beer Keg Gauge

Long needed by tavern keepers has been a gauge to measure the amount of beer left in a keg. Such a device, which received patent 3,212,335 for inventor Joseph A. Guiffre of Falls Church, Va., consists of a gauge connected to the keg by several valves and rubber hoses. The device measures the quantity of beer by equalizing the pressure of the carbon dioxide that is used to force the beer from the keg.

Atmospheric Glow

A method of forming "persistent" luminous trails in the upper atmosphere, about 50 miles above the earth, received patent 3,212,441.

The invention will produce a trail of light visible both to the naked eye and through conventional optical instruments. Primary use of the atmospheric glow will be to measure air currents at high elevations. However, ground controls may also use the light to locate and trace space vehicles during day or night.

The new method creates far more brilliant light and a longer lasting glow than could be obtained with previous mechanisms, according to inventors Norman W. Rosenberg and Dan S. Golomb of Newton, Mass.

They assigned rights to the U.S. Government through the Secretary of the Air Force.

To produce the glow, a compound, trimethyl aluminum, is lofted by rocket into the atmosphere where it vaporizes. The vapor interacts with the oxygen in the air to produce a luminous trail along the trajectory.

• Science News Letter, 88:301 November 6, 1965

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