

# 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 pint, 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.

**ADVANCES IN PHARMACOLOGY, Vol. 1**—Silvio Garattini and Parkhurst A. Shore, Eds.—*Academic*, 474 p., \$13. Collection of monographs on the most recent developments in pharmacological research.

**THE ALGAE**—V. J. Chapman—*Macmillan*, 472 p., illus., \$8. Provides general survey of all aspects of the algae, on the undergraduate level.

**ANIMAL TISSUE TECHNIQUES**—Gretchen L. Humason—*Freeman*, 468 p., diagrams, \$8. Laboratory handbook and textbook on standard procedures and specialized techniques.

**ARCHAIC EGYPT**—Walter B. Emery—*Penguin*, 269 p., illus. by author, 48 plates, paper, \$1.45. Based on the archaeological discoveries at Sak-kara, the necropolis of ancient Memphis, book outlines Egyptian civilization 5,000 years ago.

**ATOMIC ENERGY RESEARCH 1961: Life and Physical Science, Reactor Development, Waste Management**—U.S. Atomic Energy Commission—*GPO*, 333 p., illus., paper, \$2.25. Special report, describes briefly current fundamental research projects.

**ATOMIC THEORY AND THE DESCRIPTION OF NATURE: Four Essays with an Introductory Survey**—Niels Bohr—*Cambridge*, 119 p., paper, \$1.65. Reprint (1934).

**THE COMING OF THE AGE OF STEEL**—Theodore A. Wertim—*Univ. of Chicago Press*, 330 p., illus., \$6.95. Scholarly study of the "metamorphosis" of the Age of Iron into the Age of Steel, between 1500 and 1900 A.D.

**CROP ADAPTATION AND DISTRIBUTION**—Carroll P. Wilsie—*Freeman*, 448 p., illus., \$9. General text on principles of the ecological approach to world food problems, environmental factors and crop distribution on a climatic basis.

**DICTIONARY OF COMMERCIAL CHEMICALS**—Foster Dee Snell and Cornelia T. Snell—*Van Nostrand*, 3rd ed., 714 p., \$12.50. Designed to furnish up-to-date information on the compo-

sition of actual commercial products as sold in commerce.

**DICTIONARY OF ECOLOGY**—Herbert C. Hanson—*Philosophical Lib.*, 382 p., \$10. Definitions of terms used in ecology and related fields such as forestry, agronomy, soils and genetics.

**DIFFERENTIAL EQUATIONS**—H. S. Bear, Jr.—*Addison-Wesley*, 207 p., \$7.50. Text presents mathematically sound treatment of elementary differential equations, following calculus course.

**THE DISMISSAL: The Last Days of Ferdinand Sauerbruch**—Jurgen Thorwald, transl. from German by Richard and Clara Winston—*Pantheon Bks*, 256 p., photographs, \$5.50. Biographical story of a famous surgeon who continued to practice beyond the limits of age and fitness.

**ELEMENTS OF MATHEMATICAL ASTRONOMY with Brief Exposition of Relativity**—Martin Davidson, rev. by Cameron Dinwoodie—*Macmillan*, 3rd ed., 276 p., diagrams, \$7.75. Text gives full treatment to methods of calculation.

**ENGINES**—Jerome S. Meyer—*World Pub. Co.*, 78 p., illus. by John Teppich, \$2.75. Explains principle of different engines to young boys.

**EXPERIMENTAL EMBRYOLOGY: Techniques and Procedures**—Roberts Rugh—*Burgess*, 3rd ed., 501 p., illus., \$9.25. Compendium of data, directions and references, describing 50 separate experimental procedures.

**FACT AND FANCY**—Isaac Asimov—*Doubleday*, 264 p., \$3.95. Collection of 17 essays, speculative extensions of established scientific facts.

**FLIGHT HANDBOOK: The Theory and Practice of Powered Flight**—W. T. Gunston, Ed.—*Aero Pubs.*, 6th ed., 331 p., illus., \$7.50. Completely revised British text includes recent developments in aviation.

**FUNDAMENTALS OF SEMICONDUCTOR AND TUBE ELECTRONICS**—H. Alex Romanowitz—*Wiley*, 620 p., diagrams, \$8.25. Comprehensive first course in electronics presenting both tube and semiconductor theory.

**A HANDBOOK FOR PRESS ARRANGEMENTS AT SCIENTIFIC MEETINGS**—*Nat. Assn. of Science Writers*, 18 p., paper, \$1. To aid organizations and scientists in setting up effective press relations.

**A HAWK FOR THE BUSH: A Treatise on the Training of the Sparrow-hawk and other Short-winged Hawks**—J. G. Mavrogordato—*Branford*, 144 p., illus., \$10. Expert falconer's monograph on the training of one of the most difficult hawks to keep and train.

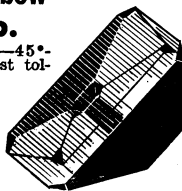
**HIGH MAGNETIC FIELDS**—Henry Kolm and others, Eds.—*M.I.T. Press (Wiley)*, 751 p., illus., \$15. Proceedings of the first international conference in this field, held at M.I.T. in Nov. 1961, dealing with the generation and use of high fields in solid-state, low-temperature and plasma physics.

## Trap Your Own Rainbow PRISM \$8.00 p.p.

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**INFORMATION AND COMMUNICATION IN BIOLOGICAL SCIENCE**—Lowell H. Hattery—*Biological Sciences Communication Project, AIBS*, 99 p., paper, 25¢ direct to publisher, 2000 P St., NW, Washington 6, D. C. Summarizes seminar discussion on the flow of biological science information from the scientist who produces it to the scientist who uses it.

**THE JUNCTION TRANSISTOR AS A SWITCHING DEVICE**—C. Le Can, K. Hart and C. de Ruyter—*Reinhold*, 244 p., diagrams, \$10. Approaches semiconductor devices as "concentration-pattern controlled" devices, providing survey of the large signal behavior of alloy junction diodes and transistors.

**LABORATORY EXPERIMENTS IN GENERAL CHEMISTRY: Including Semimicro Qualitative Analysis**—Frank A. Kanda and Benjamin P. Burt—*Harper*, 281 p., illus., paper, \$4.25.

**LAND OF THE TWO RIVERS**—Leonard Cottrell—*World Pub. Co.*, 127 p., illus. by Richard M. Powers, \$3.50. The story of the early Tigris-Euphrates civilizations, for young people.

**MANAGEMENT AND THE COMPUTER OF THE FUTURE**—Martin Greenberger, Ed.—*M.I.T. Press*, 340 p., diagrams, \$4.50. Lectures and discussions on such subjects as a library for 2000 A.D. and simulation of human thinking.

**MANKIND EVOLVING: The Evolution of the Human Species**—Theodosius Dobzhansky—*Yale Univ. Press*, 381 p., \$7.50. Geneticist explores the possibilities of understanding mankind as a product of evolution and as an evolving whole.

**MARS: Planet Number Four**—Franklyn M. Branley—*Crowell*, rev. ed., 116 p., illus. by Helmut K. Wimmer, \$3.50. For young people.

**MEDICINE TODAY**—David Margerson—*Penguin*, 112 p., illus., paper, \$1.25. Recent developments in prevention, diagnosis and treatment of disease.

**MODERN DISCOVERIES IN ARCHAEOLOGY**—Robert C. Suggs—*Crowell*, 117 p., illus. by Leonard Everett Fisher, \$2.95. Handsomely illustrated anthropologist's book for young people.

**THE MODERN FAMILY GUIDE TO EDUCATION**—Benjamin Fine, foreword by Lawrence G. Derthick—*Doubleday*, 648 p., \$7.50. A well-indexed, comprehensive round-up of information about the trend and present state of the American school system, from primary grades to college.

**MY BEST PUZZLES IN LOGIC AND REASONING**—Hubert Phillips ("Caliban")—*Dover*, 107 p., paper, \$1. One hundred non-mathematical puzzles which call for ability to establish logical relationships.

**NATURE ON THE RAMPAGE: A Natural History of the Elements**—Ann and Myron Sutton—*Lippincott*, 328 p., \$6. Naturalists' book about hurricanes, tornadoes, floods, landslides and other natural disasters.

**NEW PERSPECTIVES IN PHYSICS**—Louis de Broglie, transl. from French by A. J. Pomerans—*Basic Bks*, 291 p., \$6. Theoretical physicist's re-examination of the interpretation of the wave-particle dualism in wave mechanics, and popular essays on general questions of science.

**ON SHAME AND THE SEARCH FOR IDENTITY**—Helen Merrell Lynd—*Science Editions*, 318 p., paper, \$1.95. Reprint (1958).

**PAINT TECHNOLOGY MANUALS, Part II: Solvents, Oils, Resins and Driers**—J. H. Greaves, Ed.—*Reinhold*, 239 p., illus., \$7.50. Concerned with natural substances, other than pigments, used for making paint and varnish.

**POLARIZED LIGHT: Production and Use**—William A. Shurcliff—*Harvard Univ. Press*, 207 p., diagrams, \$6.25. Compact, scholarly account of the theory, production and major applications of polarized light.

**PSYCHOLOGY: A Study of a Science. Study II. Empirical Substructure and Relations with Other**

## Art of Argument

By Giles St. Aubyn

Here is a clear, simply written basic guide to logical thinking, showing how to spot the fallacies, the prejudices and emotionalism, the inappropriate analogies, etc., in the other fellow's argument and how to watch for and avoid the irrational in your own judgments. The author makes plain not only *how* but also *why* people resist facing the truth.

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Sciences. Vol. 4. Biologically Oriented Fields: Their Place in Psychology and in Biological Science—Sigmund Koch, Ed.—*McGraw*, 731 p., illus., \$12.50.

REPORT OF THE COMMITTEE ON ENVIRONMENTAL HEALTH PROBLEMS to the Surgeon General—Paul M. Gross, Chmn—*PHS (GPO)*, 288 p., paper, \$1. Review of programs and recommendations on toxicology, air pollution, food protection, occupational health, radiological health and water pollution.

THE SCIENCES AND THE ARTS: A New Alliance—Harold Gomes Cassidy—*Harper*, 182 p., illus., \$4.75. Yale Professor of Chemistry examines some complementary aspects of the arts and sciences.

THE SCIENTIFIC RENAISSANCE, 1450-1630—Marie Boas—*Harper*, 380 p., illus., \$6. Describes the early stages of the scientific revolution which opened the physical universe to cumulative explorations.

SMOKING AND HEALTH: Summary and Report of The Royal College of Physicians of London on Smoking in Relation to Cancer of the Lung and Other Diseases—*Pittman*, 70 p., paper, \$1. See story, *SNL* March 24, 1962, p. 181.

THE STORY OF A NATURAL HISTORY EXPEDITION—Russell Francis Peterson—*Doubleday*, 56 p., illus. by author, \$2.95. Pictures a museum search for rare animals in New Guinea, for young readers.

SUCCESSFUL MINERAL COLLECTING AND PROSPECTING—Richard M. Pearl—*New Am. Lib.*, 164 p., illus., paper, \$2.95. Well-illustrated guide for prospector and hobbyist.

THE THINKING MACHINE—John Pfeiffer—*Lippincott*, 242 p., illus., \$5.95. Story of the electronic computers that run factories, figure bank balances, place long-distance phone calls, analyze cancer cells and brain waves, and translate languages.

A TREASURY OF WORLD SCIENCE—Dagobert D. Runes, introd. by Wernher von Braun—*Philosophical Lib.*, 978 p., illus., \$15. Anthology of samples from the lucid writings of pioneering scientists, from Agricola to Volta and from Archimedes to Niels Bohr.

TREE GROWTH—Theodore T. Kozlowski, Ed.—*Ronald*, 442 p., illus., \$12. Reference work on the main aspects of the nature, control and measurement of the growth of trees.

WINTER TWIGS—Helen M. Gilkey and Patricia L. Packard—*Ore. State Univ. Press*, 109 p., illus. by authors, \$2.50. Wintertime key to deciduous trees and shrubs of northwestern Oregon and western Washington.

THE WORLD OF ICE—James L. Dyson—*Knopf*, 305 p., photographs, maps, \$6.95. Geologist describes the world of permafrost, glaciers, icebergs, climate changes, and man's explorations.

• Science News Letter, 81:268 April 28, 1962

#### GENERAL SCIENCE

### 97% of Fair Participants Plan Science Careers

► YOUNG PEOPLE soon to exhibit their outstanding science projects at the 13th National Science Fair-International to an extent of 97% are planning their futures in science. Only two percent look forward to careers in fields outside of science, while one percent have made no choice at all, based on the first 200 of an expected 400 entries.

The medical sciences attract the largest number. Almost a quarter, 24%, of the teen-aged finalists plan to enter medicine. Engineering attracts 14%, biological sciences 13%, and physics 12%.

Future teachers among the finalists who plan to combine teaching with their professional specialties account for 9%.

Chemistry and mathematics each will claim 7% of the total, while unspecified fields of science and research are in the futures of 11% of the young scientists.

The National Science Fair-International is conducted by SCIENCE SERVICE, Washington, D. C. This year the event is being held May 2-5 in connection with the Seattle World's Fair.

• Science News Letter, 81:269 April 28, 1962

### In the Beginning—DNA

(Continued from p. 263)

tricity at first, or even now. We believe the genetic code may eventually help cure hereditary defects and make cancer less mysterious."

"If we can find out how genes are activated and deactivated," he said, "we can know how cells differ from each other. We can find out why the cancer cell is different from the normal cell, and in the far future this knowledge may be used to cure thousands of people who have cancer."

"Within a year we should be able to use synthetic genes. Many problems remain, but most of them have been solved. We have evidence that the genetic code is partially universal. The similarities are strong."

At Sloan-Kettering Institute, New York, Dr. Ellen Borenfreund, who with Dr. Aaron Bendich first isolated DNA in a chemically intact form from human and other mammalian sperm, reported that their work is in very early research stages.

"We have not even been able to get the nucleic acid into the egg yet," she said.

Searching questions remain before experiments with the living organisms can attain the results dreamed about. There are skeptics such as Dr. Erwin Chargaff, professor of biochemistry at Columbia University, who challenge the prevailing view that a chain of biologic information universally exists.

But the fairy tale picture painted by some geneticists and biologists who forecast future achievements because of present accomplishments is no more fantastic than the developments following the Curies' discovery of radium.

Dr. Thomas M. Rivers of the National Foundation says the fact that we have reached the point where we can study life in terms of molecules is a marker in history that is likely to bear more weightily on human destiny than the hydrogen bomb or rockets in space.

When man can manipulate the nucleic acid in the cells of intact living bodies, Dr. Rivers believes, he can determine to some degree, yet immeasurable, what kind of human beings will inhabit the earth.

• Science News Letter, 81:263 April 28, 1962

*Bee colonies* die within 24 hours when no water is available and air temperatures exceed 100 degrees Fahrenheit.

The U.S. Department of Agriculture has established a Boll Weevil Research Laboratory at State College, Miss., to develop improved methods of *boll-weevil* control.

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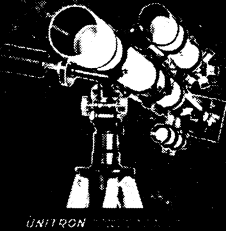
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