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**AFRICA**—Emil Schulthess—Viking Press, 120 p., 70 photographs by author, \$6.95. A beautiful portrait of the continent with chapters by Emil Egli and others on the landscapes, people and animals of Africa.

**THE AIR ENVELOPE OF THE EARTH**—Kh. P. Pogosyan, transl. from Russian—Israel Program for Scientific. Transl. (Clearinghouse), 230 p., illus., paper, \$6. Deals with the earth's atmosphere, the inflow of solar energy, temperature and motion of the air, the water cycle, cyclones, jet streams, weather forecasting and climate fluctuations.

**ATOMIC ENERGY IN USE**—U.S. Atomic Energy Commission—GPO, 77 p., illus., paper, 35¢. Presents the principal facts of atomic science in easy-to-understand language, explaining what uranium, radiation, reactors, radioisotopes, atom smashers and fusion are.

**BASIC RESEARCH, APPLIED RESEARCH AND DEVELOPMENT IN INDUSTRY, 1962**—National Science Foundation, Office of Economic and Manpower Studies—GPO, 195 p., paper, \$1. Presents and analyzes final data from the 1962 survey of industrial research and development, including tables on geographic distribution, funds, performance, employment, costs and other data.

**BIBLIOGRAPHY OF BOOKS FOR CHILDREN, 1965**—Evelyn C. Thornton, Ed.—Assn. for Childhood Educ., rev. ed., 128 p., paper, \$1.50. Grouped by subject, includes substantial science section.

**BIOLOGICAL SCIENCE:** Interaction of Experiments and Ideas—Biological Sciences Curriculum Study, Arnold B. Grobman, Dir.—Prentice-Hall, 429 p., illus., \$5.95; teacher's ed. \$6.84. Conceived as a guide to learning, relating laboratory work to parallel readings from the literature. Most laboratory investigations are designed for team operation.

**CAN VOLUNTARY CONTROLS DO THE JOB?**—Odin W. Anderson and others—Center for Health

Administration Studies, 75 p., paper, \$3.50. Proceedings of Seventh Annual Symposium on Hospital Affairs, discussing the responsibilities of the medical staff, and evaluating fiscal and quality controls in the hospital and alternatives in hospital controls.

**A COMPENDIUM OF AEROBEE SOUNDING ROCKET LAUNCHINGS FROM 1959 THROUGH 1963**—Jon R. Busse and Merrill T. Leffer—NASA (Clearinghouse), 170 p., illus., paper, \$5. Summarizes actual vehicle performance data for 95 Aerobee vehicle launchings.

**DISCOVERING PHYSICS**—Philip E. Heafford—Philosophical Lib., 262 p., \$6. A British secondary school two-year course in modern physics.

**THE EDUCATION OF A PHYSICIAN**—Johns Hopkins Magazine Eds.—Shelley Pub. Co., 2nd ed., 78 p., photographs by Robert Phillips, paper, \$1.50. Shows in word and picture the making of a U.S. doctor.

**ESSENTIALS OF EARTH HISTORY: An Introduction to Historical Geology**—William Lee Stokes—Prentice-Hall, 2nd ed., 468 p., illus., \$8.95. Substantially rewritten, revision includes the discoveries of recent years.

**THE FINAL INEQUALITY: A Critical Assessment of Woman's Sexual Role in Society**—L. J. Ludovici—Norton, 271 p., \$4.95. Reviews the religious and social prejudices through history and examines the sources of social attitudes today.

**FUNDAMENTAL RESEARCH AND THE POLICIES OF GOVERNMENTS**—A. Marechal, Chmn.—O.E.C.D. (McGraw), 72 p., paper, \$1.50. Report by members of the advisory group to the Ministerial Meeting of the Organisation for Economic Cooperation and Development, meeting in Paris in January 1966.

**GEOLOGY OF GRANITE**—E. Raguin, transl. from French by E. H. Kranck and P. R. Eakins; foreword by C. E. Wegman—Interscience, 314 p., illus., \$11. First published in 1957, this unusually comprehensive treatment of the subject is particularly valuable to young research workers.

**GOVERNMENT AND ALLOCATION OF RESOURCES TO SCIENCE**—H. Brooks and others—O.E.C.D. (McGraw), 66 p., paper, \$1. Report prepared by international group of experts, discussing the allocation of funds at the departmental level, and procedures and criteria for national policy-making.

**GOVERNMENT AND TECHNICAL INNOVATION**—C. Macleod, Chmn., K. Pavitt, Ed.—O.E.C.D. (McGraw), 60 p., paper, \$1. Background report based on workshop discussion of delegates from Belgium, France, Norway, Sweden and the United Kingdom under the chairmanship of U.S. delegate.

**IN SEARCH OF SANITY: The Journal of a Schizophrenic**—Gregory Stefan, postscript by Humphrey Osmond—Univ. Bks., 257 p., \$5. Relates the experience of a schizophrenic, his response to various treatments, ending with recovery.

**INTRODUCTION TO THE CLINICAL LABORATORY**—Robert P. MacFate—Year Bk. Medical Pubs., 2nd ed., 591 p., illus., \$11.50. An up-to-date presentation of fundamental laboratory data and procedures, for the laboratory technologist.

**THE LOW ACHIEVER IN MATHEMATICS**—Lauren G. Woodby, Ed.—OE (GPO), 96 p., paper, 35¢. Report includes papers dealing with the sociological and psychological factors in low achievement and discussion of current promising practices with recommendations.

**MYTHS OF CREATION**—Philip Freund—Washington Square Press, 304 p., illus. by Milton Charles, \$4.95. A study of both ancient myths and modern science on the origin and creation of the universe.

**NAVEN: A Survey of the Problems Suggested by a Composite Picture of the Culture of a New Guinea Tribe Drawn from Three Points of View**—Gregory Bateson—Stanford Univ. Press, 2nd ed., 312 p., 28 plates, paper, \$2.95. Reprint (1958).

**NEBRASKA SYMPOSIUM ON MOTIVATION, 1965**—David Levine, Ed.—Univ. of Neb. Press, 344 p., \$5.50; paper, \$2.50. Series of papers showing increased emphasis on mediational, cognitive or central processes in theories of motivation.

**OUR SPACE ENVIRONMENT**—Phillip D. Stern—Holt, 160 p., illus., \$2.95; paper, \$1.60. A readable and informative account of the vast spaces of the universe, from ancient misconceptions to recent discoveries.

**PARADOX AND DISCOVERY**—John Wisdom—Philosophical Lib., 166 p., \$7.50. Reprint of essays, lectures and articles concerned with metaphysical questions.

**PRECIPITATION FROM IRON-BASE ALLOYS**—Gilbert R. Speich and John B. Clark, Eds.—Gordon & Breach, 412 p., illus., \$21; paper, \$8.50. Symposium proceedings, 1963, and discussions.

**PREPARATION OF METALS FOR PAINTING**—Samuel Spring—Reinhold, 318 p., illus., \$12. Deals with oxide removal and the pickling of ferrous

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**REGIONAL DIFFERENCES IN JUNIOR COLLEGES**—James M. Richards, Jr., Leonard P. and Lorraine M. Rand—R&D Div., Am. College Testing Program, 17 p., paper, single copies free upon request direct to publisher, P.O. Box 168, Iowa City, Iowa 52240. Examines the geographical distributions of various junior college characteristics.

**THE ROLE OF THE FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY**: Report for 1963 and 1964—Office of Science and Technology, Donald F. Hornig, Dir.—Executive Office of the President, 53 p., paper, single copies free upon request direct to Office of Science & Technology, Executive Building, Washington, D.C. Reviews specific activities of the Council and its committees, and the general setting in which the Council works.

**SCIENTIFIC AND ENGINEERING MANPOWER IN COMMUNIST CHINA, 1949-1963**—Chu-yuan Cheng—National Science Foundation (GPO), 588 p., map, paper, \$2. Brings together and analyzes all available materials on mainland China's scientific planning, training programs, quality and quantity, employment and utilization of scientists and engineers, and other related data. See story, p. 91.

**THE SOCIAL SCIENCES AND THE POLICIES OF GOVERNMENTS**—Lucien Massart, Chmn.—O.E.C.D. (McGraw), 102 p., paper, \$1.50. Prepared for the 1966 Ministerial Meeting on Science in Paris, this report focuses on the relations between governmental science policies and the social sciences as instruments of research needed to determine and predict the human, social and economic effects of such policies.

**TELEVISION IN THE LIVES OF OUR CHILDREN**—Wilbur Schramm, Jack Lyle and Edwin B. Parker—Stanford Univ. Press, 324 p., paper, \$2.95. Reprint (1961).

**TRANSFORMATIONS**: Change from Learning to Growth—W. R. Bion—Basic Bks., 183 p., \$4.50. Develops the author's theory of psychoanalysis.

**THE WARRIOR APACHES**: A Story of the Chiricahua and Western Apache—Gordon C. Baldwin—Dale Stuart King (Ariz.), 144 p., illus. by C. Randolph McKusick, photographs, maps, \$3.50; paper, \$1.95. Narrative account of the history, tribal life, customs and crafts of two groups of Apache Indians, for young people.

• Science News Letter, 89:92 February 5, 1966

## Nature Note

### Crayfish

► **CRAYFISH**, lobsters, shrimp and crabs are relations in the class Crustacea, all bearing two pairs of antennae and at least five pairs of legs. The head and thorax of these marine animals are fused into one piece, called the cephalothorax, and form a protective sheath over the animal. This sheath, or crust, suggested the class name Crustacea.

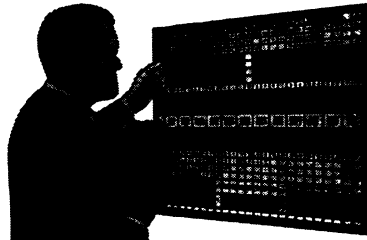
Crayfish are abundant in streams and freshwater ponds of all the continents, wherever there is a sufficient amount of calcium carbonate in the water. Some live in rapidly flowing streams and others of these creatures, also called crawfish, live in stagnant ponds or in wet meadows and marshes.

These beady-eyed creatures lurk patiently under flattish stones, with just their heads protruding from their hiding places. Two pairs of waving antennae, one pair short, the other long and slender, keep tabs on passing visitors, and when a small fish or other tasty creature passes within reach, the crayfish grabs it with his pincer claws.

When its watery world is calm and quiet, the crayfish crawls forward around the bottom slowly and jerkily. But if disturbed, it shoots backward rapidly by contracting its abdominal muscles and folding its tail fin underneath its body. It is to this swift ability to retreat that a person refers when he says someone has "crawfished" out of an undertaking.

• Science News Letter, 89:93 February 5, 1966

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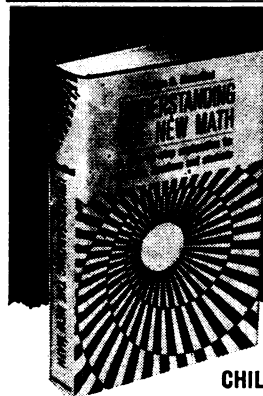
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