form. The authors point out that the transform "reduces the order of transcendence" of many types of equations, notably linear equations and equations involving convolutions. They recommend solving these simpler problems numerically and then numerically inverting the transform to obtain a numerical answer to the original problem. They discuss a variety of approximate linearizing methods of an iterative sort, such as Picard iterations and the method of quasilinearization, as means of extending their solution methods to certain nonlinear equations.

As for the numerical inversion of the Laplace transform, the authors suggest a procedure which amounts to replacing the relation defining the transform with a system of linear equations which are obtained by evaluating the integral by a method of numerical quadrature of Gaussian type. The authors also include a section on dynamic programming. Numerous examples are included in the text.

The authors suggest that this book is well suited to the purposes of certain nonmathematicians, such as biologists, who want to get answers to equations arising in their work. These methods, they claim, will enable such investigators to relegate the onerous task of computation to assistants. In my opinion the authors have succeeded in their aims, which were to convey a superficial understanding. I strongly recommend this book to those whose needs will be satisfied by superficiality. To those who want something else, the book is a poor investment of time.

W. L. MIRANKER

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### **Paleoecological Study**

The Prehistoric Animal Ecology and Ethnozoology of the Upper Great Lakes Region. CHARLES EDWARD CLELAND. Anthropological Papers, Museum of Anthropology, University of Michigan, No. 29. Ann Arbor, 1966. 304 pp., illus. Paper, \$3.

This doctoral dissertation reflects the present archeological concern with the relationship of prehistoric man to his environmental setting, as opposed to the earlier almost exclusive preoccupation with problems of chronology and culture description. Cleland's study, a component part of an integrated ap-

proach of Michigan's Museum of Anthropology to the changing patterns of environmental adjustment of the prehistoric Upper Great Lakes peoples, takes its departure from the analysis of the faunal remains found at a series of sites in the region. He moves from a general account of the paleoecology of the region beginning at 12,000 B.C. to a treatment of the ethnozoology of the cultures of this broad time range, ethnozoology being defined as the study of the relationship between animal species and man within particular cultures. A useful distinction is made between focal and diffuse economies as two polar types, focal economies being highly specialized ones which are seen as tending to produce cultural stability. Diffuse economies exhibit an ability to exploit a variety of resources, and it is suggested that societies practicing them are relatively flexible and adaptable. These hypotheses deserve further testing and elaboration. The conclusions summarize the ecological relationships of the prehistoric culture periods of the region, and appendices present detailed faunal analyses of sites and useful maps of animal distributions.

The new data on faunal remains from prehistoric sites made available by this study are particularly welcome because of the present paucity of such material. The summary of climatic, vegetational, and cultural changes is also welcome as an early approximation of the situation. From a climatic point of view Cleland places too great reliance on simple temperature changes, to the neglect of the equally important precipitation shifts which inevitably accompany changing patterns of atmospheric circulation. Failure adequately to consider circulation patterns is also evident in a tendency to assume that climatic changes in other regions will be paralleled by identical changes in the Upper Great Lakes area. From the cultural point of view, there is still substantial difference of opinion over the time placement and relations of some of the prehistoric groups. However, differences of opinion in regard to interpretative detail should not obscure the fact that this approach and synthesis from an archeological perspective ably demonstrate the contribution this discipline can make to the general area of paleoecology.

DAVID A. BAERREIS Department of Anthropology, University of Wisconsin, Madison

#### **Books Received**

Abnormal Hemoglobins in Human Populations: A Summary and Interpretation. Frank B. Livingstone. Aldine, Chicago, 1967. 482 pp. Illus. \$12.50.

Across the Top of Russia. Richard Petrow. McKay, New York, 1967. 382 pp. Illus. \$6.95.

Advances in Applied Mechanics. vol. 10, fasc. 1. G. Kuerti, Ed. Academic Press, New York, 1967. 114 pp. Illus. Paper, \$4.75. Two papers.

Advances in Geophysics. vol. 12. H. E. Landsberg and J. Van Mieghem, Eds. Academic Press, New York, 1967. 459 pp. Illus. \$18.50. Six papers.

Advances in Microwaves. vol. 2. Leo Young, Ed. Academic Press, New York, 1967. 432 pp. Illus. \$17. Six papers.

Advances in Veterinary Science. vol. 11. C. A. Brandly and Charles Cornelius. Eds. Academic Press, New York, 1967. 420 pp. Illus. \$17. Eight papers.

Alternatives for Balancing World Food Production and Needs. Martha E. Lochner, Ed. Iowa State Univ. Press, Ames, 1967. 281 pp. Illus. \$4.95. Fifteen papers.

The Amateur Astronomer's Glossary. Patrick Moore. Norton, New York, 1967. 168 pp. Illus. \$5.95.

American Historical Anthropology. Essays in honor of Leslie Spier. Carroll L. Riley and Walter W. Taylor, Eds. Feffer and Simons, London; Southern Illinois Univ. Press, Carbondale, 1967. 269 pp. Illus. \$7.50. Eleven papers.

Anatomy of the Vertebrates: A Laboratory Guide. George C. Kent. Mosby, St. Louis, 1967. 122 pp. Illus. Paper, \$3.85.

Antimicrobial Agents and Chemotherapy-1966. Proceedings of the Sixth Interscience Conference (Philadelphia), October 1966. Gladys L. Hobby, Ed. American Soc. for Microbiology, Ann Arbor, Mich., 1967. 784 pp. Illus. \$15. Automation in Analytical Chemistry. Technicon Symposia (New York and Paris), October-November 1966. vols. 1 and 2. Nicholas Biddle Scova, E. Kawerau, H. Jerome, D. Stamm, and others, Eds. Mediad, White Plains, N.Y., 1967. 518 pp. Illus. There are 23 papers.

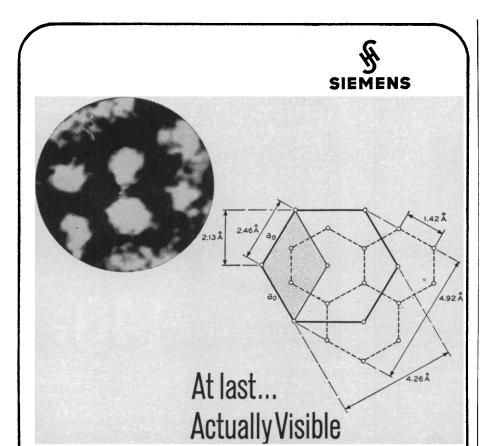
**Biochemistry and Blood Platelets.** A colloquium (Warszawa), April 1966. E. Kowalski and S. Niewiarowski, Eds. PWN-Polish Scientific Publishers, Warsaw; Academic Press, New York, 1967. 199 pp. Illus. \$8. Fourteen papers.

Biochemistry of Mitochondria. A colloquium (Warsaw), April 1966. E. C. Slater, Z. Kaniuga, and L. Wojtczak, Eds. PWN-Polish Scientific Publishers, Warsaw; Academic Press, New York, 1967. 130 pp. Illus. \$5.75. Seven papers.

The Birds of America. Seven volumes. John James Audubon. With a new introduction by Dean Amadon. Dover, New York, 1967. vol. 1, 262 pp.; vol. 2, 205 pp.; vol. 3, 233 pp.; vol. 4, 321 pp.; vol. 5, 346 pp.; vol. 6, 457 pp.; vol. 7, 400 pp. Illus. Paper, \$2.50 per volume. Reprint, octavo edition (1840-44).

Blood Clotting Enzymology. Walter H. Seegers, Ed. Academic Press, New York,

(Continued on page 1228)



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(Continued from page 1164)

1967. 640 pp. Illus. \$27.50. Twelve papers.

Book of ASTM Standards: With Related Material. pt. 5, Copper and Copper Alloys (Including Electrical Conductors) (814 pp. \$12); pt. 9, Cement; Lime; Gypsum (520 pp. \$8); pt. 16, Structural Sandwich Constructions; Wood; Adhesives (916 pp. \$14); pt. 28, Rubber; Carbon Black; Gaskets (1168 pp. \$20); pt. 30, General Testing Methods; Radioisotopes and Radiation Effects; Statistical Methods; Appearance of Materials; Emission, Molecular, and Mass Spectroscopy; Sensory Evalua-tion of Materials and Products; Gas Chromatography; Temperature Measurement; Space Simulation; Microscopy (1124 pp. \$18); pt. 31, Physical and Mechanical Testing of Metals-Metallography, Nondestructive Testing, Fatigue, Effect of Temperature (990 pp. \$6); pt. 32, Chemical Analysis of Metals; Sampling and Analysis of Metal Bearing Ores (932 pp. \$16). American Soc. for Testing and Materials, Philadelphia, 1967. Illus.

Botany: A Textbook for Colleges. J. Ben Hill, Henry W. Popp, and Alvin R. Grove, Jr. McGraw-Hill, New York, ed. 4, 1967. 644 pp. Illus. \$9.95.

Casebook in Production Management. Louis J. Rago. International Textbook Company, Scranton, Pa., 1967. 552 pp. Illus. Paper.

Characteristics of Sea Reverberation. V. V. Ol'shevskii. Translated from the Russian (Moscow, 1966). Consultants Bureau, New York, 1967. 171 pp. Illus. Paper, \$19.50. Forty-five papers.

Chemical Reactions at High Pressures. K. E. Weale. Spon, London; Barnes and Noble, New York, 1967. 365 pp. Illus. \$12.50.

Chemical Thermodynamics: A Problems Approach. Norman O. Smith. Reinhold, New York, 1967. 288 pp. Illus. \$8.50.

The Chemistry of Non-Aqueous Solvents. vol. 2, Acidic and Basic Solvents. J. J. Lagowski, Ed. Academic Press, New York, 1967. 414 pp. Illus. \$18.50. Seven papers.

Comprehensive Biochemistry. vol. 22, Bioenergetics. Marcel Florkin and Elmer H. Stotz, Eds. Elsevier, New York, 1967. 226 pp. Illus. \$12.75. Four papers.

Computer Solution of Linear Algebraic Systems. George E. Forsythe and Cleve B. Moler. Prentice-Hall, Englewood Cliffs, N.J., 1967. 160 pp. Illus. \$6.75.

Digital Computer User's Handbook. Melvin Klerer and Granino A. Korn, Eds. McGraw-Hill, New York, 1967. Unpaged. Illus. \$27.50.

Dissection of the Frog. Warren F. Walker, Jr. Freeman, San Francisco, 1967. Illus. Seven loose-leaf exercises, 20¢ each.

Electrochemistry of Molten and Solid Electrolytes. vol. 5, Physicochemical Properties of Electrolytes and Electrode Processes. A. N. Baraboshkin, Ed. Translated from the Russian (Sverdlovsk, 1966) by Halina Wroblowa. Consultants Bureau, New York, 1967. 166 pp. Illus. Paper, \$19.50. Twenty papers.

**Elements of Nonparametric Statistics.** Gottfried E. Noether. Wiley, New York, 1967. 116 pp. Illus. \$7.95. SIAM Series in Applied Mathematics.

Energy, Organization and Life. R. Rodrigo Panares. Educational Methods. Chicago, 1967. 143 pp. Illus. Paper, \$2.95.

Engineering Properties of Roofing Systems. A symposium (Atlantic City, N.J.), June–July 1966. American Soc. for Testing and Materials, Philadelphia, 1967. 214 pp. Illus. \$14. Twelve papers.

**Erosion by Cavitation or Impingement.** A symposium (Atlantic City, N.J.), June–July 1966. American Soc. for Testing and Materials, Philadelphia, 1967. 289 pp. Illus. \$20. Ten papers.

**Etude biocoenotique d'un milieu "naturel": la prairie permanente pâturée.** Germaine Ricou. Institut National de la Recherche Agronomique, Paris, 1967. 148 pp. Illus. Paper, 21 F.

**Experimental Organic Chemistry**. Charles A. MacKenzie. Prentice-Hall, Englewood Cliffs, N.J., ed. 3, 1967. 336 pp. Illus. Paper, \$5.95.

The Explosion of Science: The Physical Universe. Sir Bernard Lovell and Tom Margerison, Eds. Meredith Press, New York, 1967. 216 pp. Illus. \$19.95 until 31 December 1967; thereafter \$24.95.

Facts on the Major Killing and Crippling Diseases in the United States Today. Compiled by the National Health Education Committee. National Health Education Committee, New York, 1967. Unpaged. Illus. Paper, \$5.25.

Fondements de la physique atomique. J. Leite Lopes. Hermann, Paris, 1967. 363 pp. Illus. 66 F.

Foundations of Fluid Mechanics. S. W. Yuan. Prentice-Hall, Englewood Cliffs, N.J., 1967. 630 pp. Illus. \$12.95.

Fourth Symposium (International) on Detonation. Proceedings (White Oak, Md.), October 1965. Sponsored by the U.S. Naval Ordnance Laboratory and Office of Naval Research, Sigmund J. Jacobs, Chairman. Department of the Navy, Washington, D.C., 1967 (available from Superintendent of Documents, Washington, D.C.). 668 pp. Illus. \$5. Sixty-nine papers and 11 abstracts.

From Raindrops to Volcanoes: Adventures with Sea Surface Meteorology. Duncan C. Blanchard. Doubleday, Garden City, N.Y., 1967. 192 pp. Illus. \$4.95.

Functional Bandaging: Including Splints and Protective Dressings. Seymour W. Meyer. Elsevier, New York, 1967. 304 pp. Illus. \$9.50.

Fundamental Aspects of Petroleum Geochemistry. Bartholomew Nagy and Umberto Colombo, Eds. Elsevier, New York, 1967. 396 pp. Illus. \$23. Eight papers.

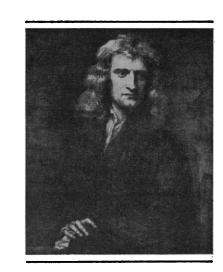
Fundamental Principles of Bacteriology. A. J. Salle. McGraw-Hill, New York, ed. 6, 1967. 832 pp. Illus. \$12.50.

**Fundamentals of Metal Deposition.** E. Raub and K. Müller. Translated from the German. Elsevier, New York, 1967. 276 pp. Illus. \$21.50.

The Genera of Flowering Plants (Angiospermae). vol. 2, Dicotyledones. J. Hutchinson. Oxford Univ. Press, New York, 1967. 669 pp. \$30.40.

General Chemistry. William A. Nevill.

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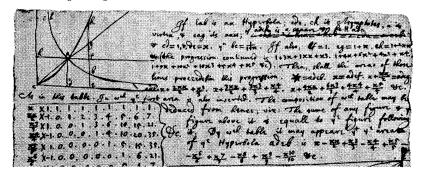


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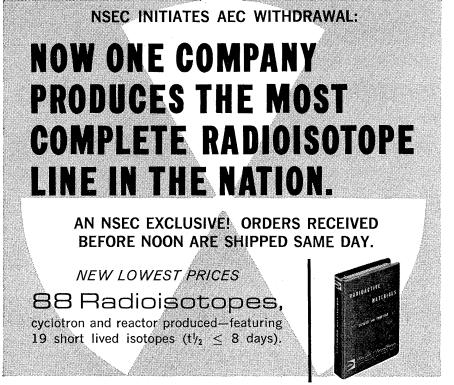
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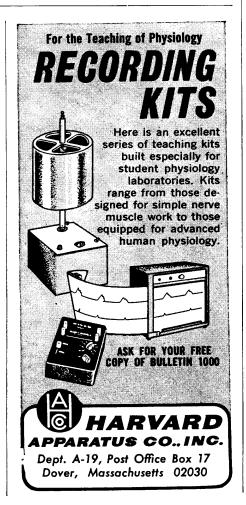


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McGraw-Hill, New York, 1967. 591 pp. Illus. \$8.50.

Genetic Elements: Properties and Function. A symposium (Warsaw), April 1966. D. Shugar, Ed. PWN-Polish Scientific Publishers, Warsaw; Academic Press, New York, 1967. 371 pp. Illus. \$15. Fifteen papers.

Historic Derivations of Modern Psychiatry. Iago Galdston, Ed. McGraw-Hill, New York, 1967. 255 pp. Illus. \$12.50.

Historical Aspects of Microscopy. A conference (Oxford, England), March 1966. S. Bradbury and G. L'E. Turner, Eds. Published for the Royal Microscopical Society. Heffer, Cambridge, England, 1967. 235 pp. Illus. 42s.

The History of Four-Footed Beasts and Serpents and Insects. vol. 1, The History of Four-Footed Beasts, Edward Topsell (620 pp.); vol. 2, The History of Serpents, Edward Topsell (246 pp.); vol. 3, The Theater of Insects, T. Muffet (270 pp.). Da Capo Press, New York, 1967. Illus. \$65 per set. Reprint, 1658 edition, with a new introduction by Willy Ley.

Husbandry of Laboratory Animals. Proceedings of the Third International Symposium (Ireland), September 1965. M. L. Conalty, Ed. Academic Press, New York, 1967. 666 pp. Illus. \$28. Thirtyseven papers.

Imprinting and Early Learning. W. Sluckin. Aldine, Chicago, 1967. 159 pp. Illus. Paper, \$2.45. Reprint, 1965 edition.

The Industrial Chemistry of the Lanthanons, Yttrium, Thorium and Uranium. R. J. Callow, Pergamon, New York, 1967. 256 pp. Illus. \$9.50.

Industrial Electrical Systems: Energy Systems Engineering. Editors of *Power*. McGraw-Hill, New York, 1967. 359 pp. Illus. \$12.50.

Industrial Furnaces. vol. 2. W. Trinks and M. H. Mawhinney. Wiley, New York, ed. 4, 1967. 374 pp. Illus. \$19.95.

Inorganic Chemistry: A Guide to Advanced Study. R. B. Heslop and P. L. Robinson. Elsevier, New York, ed. 3, 1967. 782 pp. Illus. \$11.

Inorganic Glass-Forming Systems. H. Rawson. Academic Press, New York, 1967. 329 pp. Illus. \$15. Non-Metallic Solids Series.

Introduction to Research in Ultraviolet Photobiology. John Jagger. Prentice-Hall, Englewood Cliffs, N.J., 1967. 176 pp. Illus. Paper, \$3.95.

Instruments in Clinical Medicine. F. D. Stott. Davis, Philadelphia, 1967. 152 pp. Illus. \$7.

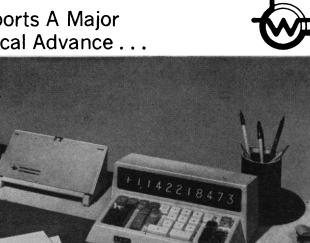
Integrated Circuit Technology: Instrumentation and Techniques for Measurement, Process, and Failure Analysis. Seymour Schwartz, Ed. McGraw-Hill, New York, 1967. 364 pp. Illus. \$15. Twelve papers.

**Kwakiutl Ethnography.** Franz Boas. Helen Codere, Ed. Univ. of Chicago Press, Chicago, 1967. 477 pp. Illus. \$12.50.

The Life of Rivers and Streams. Robert L. Usinger. McGraw-Hill, New York, 1967. 232 pp. Illus. \$4.95. Our Living World of Nature Series.

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James B. Vernon. Wiley, New York, 1967. 295 pp. Illus. \$14.95.

Lizard Ecology: A Symposium (Kansas City, Mo.), June 1965. William W. Milstead, Ed. Univ. of Missouri Press, Columbia, 1967. 312 pp. Illus. \$7.50. Nine papers.

Macro-Economic Theory: A Mathematical Treatment. R. G. D. Allen. Macmillan, London; St. Martin's Press, New York, 1967. 432 pp. Illus. \$10.

A Malay Village and Malaysia: Social Values and Rural Development. Peter J. Wilson. Human Relations Area Files Press, New Haven, Conn., 1967 (order from Taplinger, New York). 181 pp. Paper. \$3.95.

Mathematical Challenges to the Neo-Darwinian Interpretation of Evolution. A symposium (Philadelphia), April 1966. Paul S. Moorhead and Martin M. Kaplan, Eds. Wistar Institute Press, Philadelphia, 1967. 152 pp. Illus. Paper, \$5. Wistar Institute Symposium Monograph, No. 5. Sixteen papers.

Methods of Wood Chemistry. vol. 2. B. L. Browning. Interscience (Wiley), New York, 1967. 522 pp. Illus. \$18.75.

The Middle East: A Social Geography. Stephen H. Longrigg. Aldine, Chicago, 1967. 288 pp. Illus. Paper, \$2.95. Reprint, 1963 edition.

The Monsoon Lands of Asia. R. R. Rawson. Aldine, Chicago, 1967. 256 pp. Illus. Paper, \$2.95. Reprint, 1963 edition.

Music, Physics and Engineering. Harry F. Olson. Dover, New York, ed. 2, 1967. 472 pp. Illus. Paper, \$2.75.

The Natural History of Viruses. C. H. Andrewes. Norton, New York, 1967. 245 pp. Illus. \$8.50.

The New Social Studies. Edwin Fenton. Holt, Rinehart and Winston, New York, 1967. 156 pp. Illus. \$3.95.

Operators: An Algebraic Synthesis. D. R. Dickinson. Macmillan, London; St. Martin's Press, New York, 1967. 253 pp. Illus. \$7.50.

**Optical Properties of Metals.** A. V. Sokolov. Translated from the Russian edition (Moscow, 1961) by S. Chomet. O. S. Heavens, Translation Ed. Elsevier, New York, 1967. 492 pp. Illus. \$22.75.

Orbis Geographicus, 1964-66. pt. 2. Geographers by Countries. Compiled by E. Meynen. Steiner, Wiesbaden, 1967. 529 pp. Paper, DM 28.

Organometallic Chemistry. Peter L. Pauson. St. Martin's Press, New York, 1967. 208 pp. Illus. \$10.

Paleozoic Carbonate Microfacies of the Eastern Stable Interior. Albert V. Carozzi and Daniel A. Textoris. Brill, Leiden, Holland, 1967. Unpaged. 116 G.

Perfumery and Flavoring Synthetics. Paul Z. Bedoukian. Elsevier, New York, ed. 2, 1967. 413 pp. Illus. \$23.

The Petroleum Chemicals Industry. Richard Frank Goldstein and A. Lawrence Waddams. Spon, London; Barnes and Noble, New York, ed. 3, 1967. 539 pp. Illus. \$22.

Physical Chemistry of Surfaces. Arthur W. Adamson. Interscience (Wiley), New York, ed. 2, 1967. 767 pp. Illus. \$15.

Physical Quantities and Units. A selfinstructional programmed manual. Edward F. O'Day. Prentice-Hall, Englewood Cliffs, N.J., 1967. 360 pp. Illus. \$6.95.

Planning the Community Hospital. Roy Hudenburg. McGraw-Hill, New York, 1967. 448 pp. Illus. \$16.95.

Die Pocken: Erreger, Epidemiologie und Klinisches Bild. A. Herrlich. Thieme, Stuttgart, 1967. 376 pp. Illus. DM 89.

**Problems of Modern Physics.** H. A. Lorentz. Dover, New York, 1967. 320 pp. Illus. Paper, \$2.25. Reprint, 1927 issue.

**Progress in Physical Organic Chemis**try. vol. 5. Andrew Streitwieser, Jr., and Robert W. Taft, Eds. Interscience (Wiley), New York, 1967. 368 pp. Illus. \$16. Three papers.

**Progress in Polymer Science.** vol. 1. A. D. Jenkins, Ed. Pergamon, New York, 1967. 206 pp. Illus. \$10. Four papers.

Progress in Reaction Kinetics. vol. 4. G. Porter, Ed. Pergamon, New York, 1967. 531 pp. Illus. \$15. Ten papers.

**Protides of the Biological Fluids.** Proceedings of the 14th Colloquium (Bruges, Belgium), 1966. H. Peeters, Ed. Elsevier, New York, 1967. 748 pp. Illus. \$40. There are 100 papers in English, French, or German.

Quantum Electronics. Amnon Yariv. Wiley, New York, 1967. 496 pp. Illus. \$14.95.

Radiation Research. Proceedings of the Third International Congress (Cortina d'Ampezzo, Italy), June–July 1966. G. Silini, Ed. North-Holland, Amsterdam; Interscience (Wiley), New York, 1967. 943 pp. Illus. \$39. Eleven papers.

Radiobiological Factors in Manned Space Flight. Wright H. Langham, Ed. Natl. Acad. of Sciences-Natl. Research Council, Washington, D.C., 1967. 292 pp. Illus. \$7.50. Report of the Space Radiation Study Panel of the Life Sciences Committee.

The Rat: A Study in Behaviour. S. A. Barnett. Aldine, Chicago, 1967. 306 pp. Illus. Paper, \$2.95. Reprint, 1963 edition.

Die räumliche quatenmechanische Axialund Schalenstruktur der Atomkerne. Rudolf Weckering. Hermann, Luxemburg, 1967. 332 pp. Illus. 760 Belgian.

Recent Advances in Clinical Neurophysiology. Proceedings of the sixth international congress (Vienna), September 1965. L. Widén, Ed. Elsevier, New York, 1967. 320 pp. Illus. \$24.50. Thirty-three papers.

Recherches sur l'amino-carboxypeptidase (dipeptidase) de Saccharomyces cerevisiae var. ellipsoideus. Robert Cordonnier. Institut National de la Recherche Agronomique, Paris, 1967. 114 pp. Illus. Paper, 17 F.

Regional Development of the Brain in Early Life. A symposium (Paris), December 1964. Sponsored by Council for International Organizations of Medical Sciences and Délégation Générale à la Recherche Scientifique et Technique. Alexandre Minkowski, Ed. Davis, Philadelphia, 1967. 551 pp. Illus. \$24. Twentyseven papers. Most of the papers are in English, others in French.

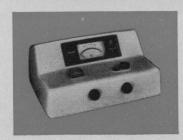
Rekristallisation metallischer Werkstoffe. A conference (Berlin), April 1965. G. E. R. Schulze, Ed. VEB Deutscher Verlag für Grundstoffindustrie, Leipzig, 1966. 212 pp. Illus. Seventeen papers.

Relation of Testing and Service Performance. A symposium (Atlantic City, N.J.), June-July 1966. American Soc.

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LABORATORY SUPPLIES AND EQUIPMENT WILKENS - ANDERSON CO. 4525 W. DIVISION ST. CHICAGO 51. ILL. for Testing and Materials, Philadelphia, 1967. 101 pp. Illus. Paper, \$7.50. Five papers.

**Resinography of Cellular Physics.** A symposium (Atlantic City, N.J.), June–July 1966. American Soc. for Testing and Materials, Philadelphia, 1967. 101 pp. Illus. Paper, \$7.50. Seven papers.

La résorption osseuse et l'hormone parathyroïdienne. Gilbert Vaes. de Visscher, Bruxelles; Librairie Maloine, Paris, 1967. 135 pp. Illus.

The Science of Biology. Paul B. Weisz. McGraw-Hill, New York, ed. 3, 1967. 910 pp. Illus. \$9.95.

Scientific Innovation and Industrial Prosperity. J. A. Allen. Elsevier, New York, 1967. 152 pp. Illus. \$7.

Sebei Law. Walter Goldschmidt. Univ. of California Press, Berkeley, 1967. 319 pp. Illus. \$7.50.

A Second Course in Complex Analysis. William A. Veech. Benjamin, New York, 1967. 256 pp. Illus. \$8.75.

Semiconductors and Semimetals. vol. 3, Optical Properties of III-V Compounds. R. K. Willardson and Albert C. Beer, Eds. Academic Press, New York, 1967. 582 pp. Illus. \$23. Twelve papers.

Solid-State Chemistry. N. B. Hannay. Prentice-Hall, Englewood Cliffs, N.J., 1967. 239 pp. Illus. Paper, \$4.95; cloth, \$6.95.

**Space Frontier**. Wernher von Braun. Holt, Rinehart and Winston, New York, 1967. 224 pp. Illus. \$4.95.

**Spectroscopy**. vol. 2, Ultra-violet, Visible, Infra-red and Raman Spectroscopy. S. Walker and H. Straw. Chapman and Hall, London, 1962; Barnes and Noble, New York, 1967. 412 pp. Illus. Paper, \$6.75; cloth, \$12.50. Reprint.

Symposium on Oral Sensation and Perception. James F. Bosma, Ed. Thomas, Springfield, Ill., 1967. 370 pp. Illus. \$18.50. Twenty papers.

Table of Isotopes.C. Michael Lederer,Jack M. Hollander, and Isadore Perlman.Wiley, New York, 1967.608 pp. Illus.Paper, \$4.95; cloth, \$7.95.Techniques of Pulse-Code Modulation

Techniques of Pulse-Code Modulation in Communication Networks. G. C. Hartley, P. Mornet, F. Ralph, and D. J. Tarran. Cambridge Univ. Press, New York, 1967. 116 pp. Illus. \$5.50.

**Textile Chemistry.** vol. 2, Impurities in Fibres: Purification of Fibres. R. H. Peters. Elsevier, New York, 1967. 388 pp. Illus. \$23.

Theoretical Physics: Applications of Vectors, Matrices, Tensors, and Quaternions. A Kyrala. Saunders, Philadelphia, 1967. 373 pp. Illus. \$9. Studies in Physics and Chemistry, No. 5.

Theory of Energy Transfers and Conversions. Federico Grabiel. Wiley, New York, 1967. 231 pp. Illus. \$10.95.

**Theory of Heat.** Richard Becker. Revised translation of the first German edition by Günther Leibfried. Springer-Verlag, New York, 1967. 392 pp. Illus. \$14.50.

Theory of Linear Active Networks. Ernest S. Kuh and R. A. Rohrer. Holden-Day, San Francisco, 1967. 664 pp. Illus. \$17.50. Series in Information Systems.

Theory of Orbits: The Restricted Problem of Three Bodies. Victor Szebehely. Academic Press, New York, 1967. 684 pp. Illus. \$25.

Thermal Conductivity Measurements of Insulating Materials at Cryogenic Temperatures. A symposium (Philadelphia), February 1966. American Soc. for Testing and Materials, Philadelphia, 1967. 124 pp. Illus. Paper, \$9.50. Nine papers.

Toward New Dimensions of Catholic Higher Education. Louis C. Vaccaro, Ed. Education Research Associates, Arlington, Va., 1967. 112 pp. Paper, \$2.65. Ten papers.

UNESCO Handbook of International Exchanges. UNESCO, Paris, 1967. 1102 pp. Paper, \$14. Contains information on the activities of 272 international organizations, over 5000 governmental and nongovernmental agencies and institutions in 126 different states and territories in English, French, Spanish, and Russian.

United States Government Organization Manual, 1967–1968. Office of the Federal Register, General Services Administration, Washington, D.C., 1967 (order from Superintendent of Documents, Washington, D.C.). 837 pp. Paper, \$2.

#### **Miscellaneous Publications**

The Aboriginal Cultural Geography of the Llanos de Mojos of Bolivia. William M. Denevan. Univ. of California Press, Berkeley, 1966. 160 pp. Plates. \$4.

Academy of Natural Sciences of Philadelphia. Monograph, No. 14, "The Catherwood Foundation Peruvian-Amazon Expedition: Limnological and systematic studies," Ruth Patrick et al (1966, 495 pp.); Proceedings, vol. 118, five papers (412 pp., 1967, \$10). Academy of Natural Sciences, Philadelphia.

American Academy of Political and Social Science. Annals, vol. 371, "Social goals and indicators for American society," Bertram M. Gross. American Acad. of Political and Social Science, Philadelphia, 1967. 291 pp.

American Museum of Natural History. Bulletin, vol. 135, pp. 217-284, "New Paleocene insectivores and insectivore classification," Leigh Van Valen (\$2.50); vol. 135, pp. 285-342, "Late Triassic fishes from the western United States," Bobb Schaeffer (\$5.50); vol. 136, pp. 1-46, "A review of the Rhinocerotoid family Hyracodontidae (Perissodactyla)," Leonard B. Radinsky (\$1.50); "A review of Simuliidae (Pternaspatha) Enderlein (Simuliidae, Diptera)," Pedro Wygodzinsky and Sixto Coscarón (\$2); The spider genus Loxosceles in South America (Araneae, Scytodidae)," Willis J. Gertsch (\$3). American Museum of Natural History, New York, 1967.

American Society for Testing and Materials. Special Technical Publication, No. 9-0, "1964 references on fatigue (with additional 1963 references)," prepared by ASTM Committee E-9 on Fatigue (97 pp. \$7.50); No. 288-B, "Supplement to the bibliography and abstracts on thermostat metals 1962-1965," prepared by ASTM Committee B-4 (33 pp. \$2.50). American Soc. for Testing and Materials, Philadelphia, 1967.

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