

of the seas. (To give only two of many possible examples of omissions, the word "pollution" occurs only once, and there is no mention whatever of mariculture.)

The book concludes with a list of references and four indexes (author, subject, plants and animals, and geographic). There are very few typographical errors, and the editing appears to have been careful.

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Viral Diseases

Slow Virus Infections of the Central Nervous System. Investigational Approaches to Etiology and Pathogenesis of These Diseases. Proceedings of a workshop, Würzburg, Germany, Mar. 1975. VOLKER TER MEULEN and MICHAEL KATZ, Eds. Springer-Verlag, New York, 1977. xii, 258 pp., illus. \$27.50.

Slow viral diseases continue to attract the attention of investigators whose primary concern is either with understanding etiologically obscure diseases of man or with defining unusual host-virus relationships. Over the past five years or so symposiums of variable composition and intent have served as gathering places for the growing number of persons who share these concerns. One such meeting was the workshop that provided the chapters and commentary that make up this slim book. The workshop brought together not only persons actively working on slow viral diseases but also biomedical scientists who were not so engaged. The latter participants were to offer appraisals of current work and to point to possible new directions for future study. And so they did.

The book is divided into four parts. It deals in turn with diseases caused by unconventional viruses (such as scrapie and kuru), diseases caused by conventional viruses (such as progressive multifocal leukoencephalopathy and subacute sclerosing panencephalitis), and multiple sclerosis and concludes with brief critiques of present research approaches.

The book has a somewhat misleading title; it is not a source of detailed information on slow viral diseases of the central nervous system, and much of the information presented in it has been presented elsewhere. In fact, several recent books bearing similar titles offer more complete information than this one does. But the book is not intended to provide detailed information. Rather, it presents

a general account of the diseases that mainly serves as a prelude for what obviously was the real concern of the workshop—the possible viral cause of multiple sclerosis.

Although multiple sclerosis cannot now be defined as a viral disease, it is thought to be a good candidate. Indeed, on the evidence summarized in this book the hypothesis that it is caused by a slow virus appears to be the best new lead for etiologic studies of the disease. The general feeling expressed in the book is one of guarded optimism. If multiple sclerosis is caused by a virus or viruses, demonstrating this causal relation may not be as straightforward as was the case with kuru and Creutzfeldt-Jakob disease. Meanwhile, the viral hypothesis will serve as a rallying point for renewed interest in multiple sclerosis, and, as Cedric Mims states in the concluding chapter, will "generate a great ground swell of research effort and active interest on the part of young people." Such interest should contribute greatly to our understanding of multiple sclerosis, whatever its cause may be.

Much of the real value of the book lies in the commentary of the diverse participants—virologists, geneticists, immunologists, epidemiologists, pathologists, and neurologists—which appears at the ends of chapters and in well-written summaries of question-and-answer sessions. Although such discussions touch on the need for a clearer definition of slow virus infection, the issue was left unresolved.

This attractive, well-prepared account of the workshop in Würzburg contains much information to ponder.

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Books Received

Analysis and Design of Sequential Digital Systems. L. F. Lind and J. C. C. Nelson. Halsted (Wiley), New York, 1977. viii, 146 pp., illus. \$17.

Annual Review of Plant Physiology. Vol. 28. Winslow R. Briggs, Paul B. Green, and Russell L. Jones, Eds. Annual Reviews, Palo Alto, Calif., 1977. x, 616 pp., illus. \$17.

Aspects of Topology. Charles O. Christenson and William L. Voxman. Dekker, New York, 1977. xiv, 518 pp., illus. \$19.75. Monographs and Textbooks in Pure and Applied Mathematics, 39.

B and T Cells in Immune Recognition. F. Loo and G. E. Roelants, Eds. Wiley-Interscience, New York, 1977. xviii, 504 pp., illus. \$41.

Basic Problems in Cross-Cultural Psychology. Papers from a congress, Tilburg, Netherlands, July 1976. Ype H. Poortinga, Ed. Published for the International Association for

Cross-Cultural Psychology by Swets and Zeitlinger, Amsterdam, 1977. viii, 380 pp., illus. Paper, \$18.

The Behavior of Communicating. An Ethological Approach. W. John Smith. Harvard University Press, Cambridge, Mass., 1977. xii, 546 pp., illus. \$20.

Biogeochemistry of a Forested Ecosystem. Gene E. Likens, F. Herbert Bormann, Robert S. Pierce, John S. Eaton, and Noye M. Johnson. Springer-Verlag, New York, 1977. xii, 148 pp., illus. Paper, \$9.80.

Biology of Nematodes. Neil A. Croll and Bernard E. Matthews. Halsted (Wiley), New York, 1977. viii, 202 pp., illus. \$13.75. Tertiary Level Biology.

Bringing Up Children Overseas. A Guide for Families. Sidney Werkman. Basic, New York, 1977. x, 222 pp. \$9.95.

Cane Sugar Handbook. A Manual for Cane Sugar Manufacturers and Their Chemists. George P. Meade and James C. P. Chen. Wiley-Interscience, New York, ed. 10, 1977. xx, 948 pp., illus. \$48.95.

The Cellular Basis of the Immune Response. An Approach to Immunobiology. Edward S. Golub. Sinauer, Sunderland, Mass., 1977. x, 278 pp., illus. Paper, \$8.95.

Chiropractic Health Care. A Conservative Approach to Health Restoration, Maintenance, and Disease Resistance. R. C. Schaffer, Ed. Foundation for Chiropractic Education and Research, Des Moines, Iowa, ed. 2, 1977. viii, 118 pp., illus. Cloth, \$5; paper, \$3.50.

Chronology of Alpine Glacier Stillstands, East-Central Lemhi Range, Idaho. Kenneth M. Knoll. Idaho State University Museum of Natural History, Pocatello, 1977. xiv, 230 pp., illus. Paper, \$8.75.

Cognitive Theory. Vol. 2. Papers from a conference, Bloomington, Ind., Apr. 1975. N. John Castellan, Jr., David B. Pisoni, and George R. Potts, Eds. Erlbaum, Hillsdale, N.J., 1977 (distributor, Halsted [Wiley], New York). x, 342 pp., illus. \$19.95.

Cold Spring Harbor Symposia on Quantitative Biology. Vol. 41, Origins of lymphocyte Diversity. Papers from a symposium, Cold Spring Harbor, N.Y. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., 1977. Two parts. xxiv + pp. 1-416, illus. + index; and xiv + pp. 417-902, illus. + index. \$60.

Compilation, Critical Evaluation and Distribution of Stellar Data. Proceedings of a colloquium, Strasbourg, France, Aug. 1976. J. Jaschek and G. A. Wilkins, Eds. Reidel, Boston, 1977. xiv, 320 pp., illus. \$36.

Correspondence Principle and Growth of Science. Władysław Krajewski. Reidel, Boston, 1977. xiv, 138 pp. \$19.50. Episteme, vol. 4.

Costs, Risks, and Benefits of Surgery. John P. Bunker, Benjamin A. Barnes, and Frederick Mosteller, Eds. Oxford University Press, New York, 1977. xxvi, 402 pp., illus. \$22.50.

Developmental Psychology. Robert M. Liebert, Rita Wicks Poulos, and Gloria Strauss Marmor. Prentice-Hall, Englewood Cliffs, N.J., ed. 2, 1977. xviii, 572 pp., illus. \$14.95.

Drug Fate and Metabolism. Methods and Techniques. Vol. 1. Edward R. Garrett and Jean L. Hirtz, Eds. Dekker, New York, 1977. xviii, 314 pp., illus. \$35.

Ecological Succession. Frank B. Golley, Ed. Dowden, Hutchinson and Ross, Stroudsburg, Pa., 1977 (distributor, Halsted [Wiley], New York). xiv, 376 pp., illus. \$25.

(Continued on page 82)

BOOKS RECEIVED

(Continued from page 48)

Elementary Probability Theory. Melvin Hausner. Plenum, New York, 1977. x, 310 pp. Paper, \$8.95. Reprint of the 1971 edition. A Plenum/Rosetta Edition.

Encyclopedia of Chemical Processing and Design. Vol. 3, Aluminum to Asphalt, Design. John J. McKetta and William A. Cunningham, Eds. Dekker, New York, 1977. xiv, 494 pp. \$95; by subscription, \$75.

Environmental Choice, Human Behavior, and Residential Satisfaction. William Michelson. Oxford University Press, New York, 1977. xx, 404 pp., illus. Cloth, \$10.50; paper, \$6.50.

Fundamentals of Chemistry in the Laboratory. Kurt Irgolic, Larry Peck, and Rod O'Connor. Illustrations by Paul Glenn. Harper and Row, New York, ed. 2, 1977. xiv, 418 pp. Paper, \$6.95.

Future Automotive Fuels. Prospects, Per-

formance, Perspective. Proceedings of a symposium, Warren, Mich., Oct. 1975. Joseph M. Colucci and Nicholas E. Gallopoulos, Eds. Plenum, New York, 1977. x, 380 pp., illus. \$39.50.

Handbook of Vegetation Science. Reinhold Tüxen, Ed. Part 13, Application of Vegetation Science to Grassland Husbandry. W. Krause, Ed. Junk, The Hague, 1977. xx, 536 pp., illus. Dfl. 150.

Health Purifiers and Their Enemies. A Study of the Natural Health Movement in the United States with a Comparison to Its Counterpart in Germany. Julius A. Roth. PRODIST (Neale Watson), New York, 1977. vi, 130 pp. Cloth, \$10; paper, \$4.95.

Hematopoietic and Lymphoid Tissue Culture. E. A. Luriya. Translated from the Russian edition (Moscow, 1972) by Basil Haigh. Consultants Bureau (Plenum), New York, 1977. xiv, 182 pp., illus. \$35. Studies in Soviet Science.

Holocene Environmental Change in the Great Basin. Papers from a symposium, San

Francisco. Robert Elston, Ed. Northern Division of the Nevada Archeological Survey at the University of Nevada, Reno, 1976. viii, 218 pp., illus. Paper, \$8. Nevada Archeological Survey Research Paper No. 8.

Introduction to Computers in Business. Elias M. Awad. Prentice-Hall, Englewood Cliffs, N.J., 1977. xiv, 496 pp., illus. \$13.95.

Low Density Lipoproteins. Charles E. Day and Robert S. Levy, Eds. Plenum, New York, 1976. xx, 446 pp. \$39.50.

Mass Spectrometry in Drug Metabolism. Proceedings of a symposium, Milan, Italy, June 1976. Alberto Frigerio and Emilio L. Ghisalberti, Eds. Plenum, New York, 1977. xii, 532 pp., illus. \$42.50.

Reminiscence, Motivation, and Personality. A Case Study in Experimental Psychology. H. J. Eysenck and C. D. Frith. Plenum, New York, 1977. xxii, 430 pp., illus. \$27.50.

The Restoration of the Self. Heinz Kohut. International Universities Press, New York, 1977. xxii, 346 pp. \$17.50.

A Synopsis of North American Desmids. Part 2, Desmidiaceae: Placodermata. Section 2. G. W. Prescott, Hannah T. Croasdale, and W. C. Vinyard. University of Nebraska Press, Lincoln, 1977. x, 414 pp., illus. \$22.50.

Temporal Codes for Memories. Issues and Problems. Benton J. Underwood. Erlbaum, Hillsdale, N.J., 1977 (distributor, Halsted [Wiley], New York). x, 158 pp., illus. \$10. John M. MacEachran Memorial Lecture Series.

Tissue Hypoxia and Ischemia. Proceedings of a symposium, Philadelphia, Aug. 1976. Martin Reivich, Ronald Coburn, Sukhamay Lahiri, and Britton Chance, Eds. Plenum, New York, 1977. xiv, 386 pp., illus. \$37.50. Advances in Experimental Medicine and Biology, vol. 78.

The Tuning of the World. R. Murray Schaffer. Knopf, New York, 1977. xii, 304 pp., illus. \$12.95.

The Uncertainty Principle and Foundations of Quantum Mechanics. A Fifty Years' Survey. William C. Price and Seymour S. Chisick, Eds. Wiley-Interscience, New York, 1977. xviii, 572 pp., illus. \$42.

The University and Medicine. The Past, the Present, and Tomorrow. Papers from a conference, Maidstone, Kent, England, May 1976. John Z. Bowers and Elizabeth F. Purcell, Eds. Josiah Macy, Jr., Foundation, New York, 1977. viii, 240 pp., illus. \$7.50.

Vascular Plants of British Columbia. A descriptive Resource Inventory. Roy L. Taylor and Bruce MacBryde. University of British Columbia Press, Vancouver, Canada, 1977. xxiv, 754 pp. Paper, \$28.

Vibration Spectra and Symmetry of Crystals. H. Poulet and J. P. Mathieu. Translated by A. Simievic. Gordon and Breach, New York, 1976. xiv, 572 pp. \$39.

Washington on Foot. 25 Walking Tours of Washington, D.C., Old Town Alexandria, Virginia, and Historic Annapolis, Maryland. Allan A. Hodges and Carol A. Hodges, Eds. Smithsonian Institution Press, Washington, D.C., ed. 2, 1977. 208 pp., illus. Paper, \$3.75.

Watching Birds. An Introduction to Ornithology. Roger F. Pasquier. Illustrated by Margaret La Farge. Houghton Mifflin, Boston, 1977. xviii, 302 pp. \$10.

Wye Island. Boyd Gibbons. Published for Resources for the Future by Johns Hopkins University Press, Baltimore, 1977. xviii, 228 pp. \$10.95.

The Year in Metabolism, 1975-1976. Norbert Freinkel, Ed. Plenum, New York, 1976. xxii, 354 pp., illus. \$22.50.

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Induces mitosis in Human Leucocytes at approx. 2.5 μg per ml of culture media.</p> <p>L 8754 From <i>Phaseolus vulgaris</i> (Kidney Bean), Type V 2 mg \$ 1.80 Phytohemagglutinin, Crude. 5 mg 3.00 Agglutinates Type A red cells at approx. 10 μg. 25 mg 10.00 Lectin per ml of 2% red cells. 50 mg 16.50 Induces mitosis in Human Leucocytes at approx. 2.5 μg per ml of culture media.</p> <p>L 5680 From <i>Lens culinaris</i> (Lentil) 1 mg \$ 5.40 Major affinity: Glucose and Mannose residues. 5 mg 18.00 Agglutinates Type A red cells at approx. 4 μg. 10 mg 30.00 Lectin per ml of 2% red cells.</p> <p>From <i>Phaseolus limensis</i> (Lima Bean) Inquire</p> <p>L 0881 From <i>Arachis hypogaea</i> (Peanut) 1 mg \$18.00 Major affinity: Galactose residue. 2 mg 28.00 Agglutinates desialated Human red blood cells at approx. 10 μg Lectin per ml of 2% red cells. 5 mg 48.00</p> <p>L 9379 From <i>Phytolacca americana</i> (Pokeweed) Mitogen, Crude 5 mg \$ 6.00 Agglutinates Type O red cells at approx. 60 μg. 8 mg 9.00 Lectin per ml of 2% red cells. 40 mg 42.00 Induces mitosis in Human Leucocytes at approx. 2.5 μg per ml in McCoy's Medium 5a modified. Our assays show this to be substantially purer than other available preparations.</p> <p>L 8004 From Glycine max (Soybean), Type VI 2 mg \$16.00 Major affinity: N-Acetylgalactosamine residues. One major band on electrophoresis. 5 mg 31.00 Agglutinates Type A red cells at approx. 20 μg Lectin per ml of 2% red cells.</p> <p>L 8379 From Glycine max (Soybean), Type VII 2 mg \$15.00 Major affinity: N-Acetylgalactosamine residues. 5 mg 30.00 Three major bands on electrophoresis. 25 mg 127.00 Agglutinates Type A red cells at approx. 20 μg. 100 mg 473.00 Lectin per ml of 2% red cells.</p> <p>L 8129 From Glycine max (Soybean), Crude 5 mg \$12.00 Ammonium Sulfate fraction. 15 mg 25.00 Agglutinates Type A red cells at approx. 250 μg Lectin per ml of 2% red cells.</p> <p>L 1005 From <i>Triticum vulgaris</i> (Wheat Germ) 2 mg \$ 8.00 Major affinity: N-Acetylglucosamine residues. 5 mg 14.50 Agglutinates Type A red cells at approx. 20 μg. 25 mg 59.25 Lectin per ml of 2% red cells. 100 mg 149.00</p>
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