

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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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.

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

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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.

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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.

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