



GREAT LAKES RESOURCE MANAGEMENT

"Resource Management in the Great Lakes Basin," edited by F. A. Butrico, C. J. Touhill, and I. L. Whitman, Battelle Memorial Institute, published by Heath Lexington Books, D.C. Heath and Company, Lexington, Mass. 186 pp., charts, and tables.

The editors believe that the many studies made on the Great Lakes Basin have failed to consider the "total system"--and that "the concepts developed in this book represent a new approach to traditional resource management in the Great Lakes Basin." They emphasize the book's timeliness: the people of several states now are being asked to decide the Great Lakes' future by their votes on bond issues.

Six problem areas are outlined: water quality; water levels and interbasin transfer; ecological imbalances; institutional arrangements; economic; and social. One estimate of the cost of depolluting the Great Lakes is more than \$8 billion.

Water Quality: The 5 Great Lakes reflect "misuse and abuse of environment by man." Lake Erie has suffered most--followed by Lakes Ontario, Michigan, Huron, and Superior. There is close correlation between population growth rates in the drainage basins around each lake and the rate of deterioration in water quality. "The conclusion is inescapable--man is directly responsible for the accelerated deterioration of water quality. If corrective action is not taken, further deterioration will accompany future population growth."

Water Levels and Interbasin Transfer: The problem of water quantity will become significant. More attention should be given to "reductions in inflows, potential reduction in outflow, and consequent variation in Lake levels." Some planners are thinking of continental water plans--from Alaska to Mex-

ico--and the Great Lakes would play a "presently unpredictable" part in these.

Ecological Imbalances: The growth of aquatic organisms is seriously impairing the beneficial uses of Great Lakes water. The biological system is changing constantly. It contains many life forms that depend on the "total ecological balance of the environment for their existence." The balance is influenced by such factors as: "the concentrations of suspended and dissolved organic and inorganic compounds; the availability of these compounds as nutrient materials; the concentrations of dissolved gases including oxygen; and the availability of sunlight."

Institutional Problems: "... analyses of water resources policy and polity is needed to ensure that progress in these aspects of water management is commensurate with technological progress."

Economic and Social Problems: Although the water resources of the Great Lakes Basin are not fully developed, resource planners are concerned most about satisfying the demands of all water users.

Financing: "The costs of water management are high." Today, the most important problem is to finance treatment facilities to control water quality.

Public Involvement: In the end, the voting public will have a decisive voice. An effective management program must generate information for public and government.

SPORT FISHING USA

"Sport Fishing USA"--Dan Saults, Managing Editor; Michael Walker, Editor; Bob Hines, Illustrator; Rex Gary Schmidt, Photo Editor, 464 pp. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 - price \$10.

The U. S. Bureau of Sport Fisheries and Wildlife has cast an authoritative net over salt and freshwater sport fishing. Rich in information and color, this book will lure amateurs and experts.

Forty-three leading writers and scientists contributed to it. There are 21 color paintings by Bob Hines, whose work long has been a paean to nature and wildlife, and many sumptuous photos.

'Sport Fishing USA' includes the history of fishing and the fun and frustration of it; fish feeding and breeding; equipment and techniques; fish migration; how pollution is altering the underwater environment; exotic fishes; the pressure of fishermen on fish; and many other interesting subjects.

TROPICAL AMERICAN MOLLUSKS

"Studies in Tropical American Mollusks, edited by Frederick M. Bayer and Gilbert L. Voss, 236 pp., illus., \$12.50s, 1971. University of Miami Press, Coral Gables, Florida 33124.

The book contains 4 papers on molluscan fauna on either side of the Isthmus of Panama. These discuss a part of the preliminary findings of research on the "feasibility and impact of a proposed interoceanic sea-level canal to connect the waters of the Gulf of Panama and the Caribbean Sea."

The editors state: "The Caribbean and Pacific coasts of Middle America of the present day are descended from what was once a broad tropical American faunal province, and the thorough knowledge of forms as they exist will provide a deeper insight into their development through geologic ages. Thus, if man can alter the marine environment on such a scale as by the artificial reuniting of the Atlantic and Pacific faunas, he inevitably will continue to do so in countless lesser ways, and studies such as these are needed to enhance our knowledge of the marine biota before the environment changes proceed farther."

The 4 papers are: "Cephalopods Collected in the Gulf of Panama," by Gilbert L. Voss; "Mollusks from the Gulf of Panama," by Axel A. Olsson; "The Conidae of the 'Pillsbury' Expedition," by James Nybakken; and "New and Unusual Mollusks Collected," by Frederick M. Bayer.

ESTIMATING AQUATIC-ANIMAL PRODUCTION

"Methods for the Estimation of Production of Aquatic Animals," Edited by G. G. Winberg, Zoological Institute Academy of Sciences of the USSR; translated by Annie Duncan, Royal Holloway College, University of London, 175 pp., \$9.00, 1971. Academic Press, London and New York.

While there were handbooks on the methods of estimating the production of fish, there was none on the production of other aquatic species until this Soviet publication. It resulted from a project begun by the Soviet National Committee of the International Biological Program. It compiles the research and theoretical work of many distinguished Soviet biologists. The book summarizes "the important work on biological production carried out in the USSR over the past 30 years."

It explains methods of measuring wet and dry weight, colorific values, fat protein and carbohydrate content. It discusses theories of animal growth and the effects of temperature on development duration and growth rate. These factors are used as a basis for several methods of computing production.

The book also describes an alternate approach to estimate invertebrate production from the quantities seen eaten by fish from seas, lakes, and fish ponds.

There is a reference list to Soviet literature--and translated titles and guide to available English translations.

COMMERCIAL OIL-FIELD DIVING

"Commercial Oil-Field Diving," by Nicholas B. Zinkowski, 372 pp., illus., \$12.50, 1971. Cornell Maritime Press, Inc., Box 109, Cambridge, Maryland 21613.

This is a manual for working divers and trainees, a practical book on all phases of oil-field diving. It includes such subjects as: "Diving as a career, physics and physiology, tending and breaking out, diving equipment, decompression and treatment tables for compressed-air diving, rigging, burning and welding under water, use of explosives, diving from a pipe-lay barge."