ness as well as environmental action related to problem solving and decision making.

The reference content is organized neatly around eight topical categories in environmental education: instructional aids; reference materials; government services; organizations and associations; magazines, journals, and newsletters; preservice and inservice education; programs and centers; and funding. A short introduction, explaining the editors' entry selection process, precedes each category list. A majority of the items listed have short annotations describing the major features of the book. While complete addresses are always given, especially of governmental agencies, the editors fail to supply those sometimes important phone numbers.

All topical sections list the expected and traditional resources such as National Audubon Society, the National Wildlife Federation, etc.; the periodical section lists many less common magazines, from *Academic Therapy* to *Youth and Society*. In another section, instructional aids, a listing of environmental games is included. Usually not available in such a reference work, but found here is a "beginner's list" of preservice and inservice environmental education programs in the United States, as well as the many nongovernmental sources of funding, such as the Danforth Foundation, potentially available to many private and public environmental education programs.

Considering the cost of this small volume, one might be tempted to obtain the same information from the many free or inexpensive resource lists published by the leading environmental groups; however, a recommendation could be made to include this volume in the school's instructional media center or library reference section. While the usefulness of this volume will become limited in time if it is not regularly updated, it provides a generous overview of the resources currently available in environmental education.

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RIVER ECOLOGY, ed. by B. A. Whitton, Studies in Ecology, vol. 2. 1975. University of California Press (2223 Fulton St., Berkeley 94720). 745 p. $40.00 hardback.

This book is written for the advanced student and researcher. The twenty-three chapters are written by twenty-seven authors, all of whom are leaders in their fields. The topics covered include hydrology, chemistry, algae, bacteria, macrophytes, zooplankton, macroinvertebrates, energy flow, thermal streams, heavy metals, and pollution indicators. Additional chapters address themselves to studies on specific rivers, management of water quality and finally, quality control systems.

As usually happens with multiply authored books, there is some overlapping, and there are some differences in classifications of the same phenomena. However, these present few problems.

Because of other recent publications, invertebrates are not heavily discussed, nor are pesticides dealt with extensively. Biology teachers will appreciate the fine coverage of the Red Cedar River, which flows through the Michigan State University campus. Because of its location, it has been the subject of many faculty and student projects. Ideas for research in the reader's own locality will come to mind while reading it. Another chapter that will suggest research projects deals with biological indicators of pollution, including discussions of advantages and disadvantages of a number of pollution indicator techniques.

An extensive list of references, an index of organisms, plus the names of all rivers mentioned in the text provide a quick source of information for those interested in aquatic problems.

Although the cost is prohibitive, this book should be on the shelf of any serious student of rivers.

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ENERGY AND ENVIRONMENT: THE FOUR ENERGY CRISES, by G. Tyler Miller Jr. 1975. Wadsworth Publishing Co. (Belmont, California 94002). 122 p. Price not given.

Are you developing a transdisciplinary course on the environment, or looking for material to supplement your ecology unit? How about an entire course on energy alternatives? Then you should take special notice of this softback book. High school and college students should find this material interesting and useful.

The four energy crises are: today's real energy crisis—Food; today's energy policy crisis; the energy policy crisis of 1985; and the real energy crisis of the years 2000 to 2020. The entire book is devoted to discussion of the last three.

The approach to this very complex problem of energy is holistic. Crossing the boundaries of many disciplines, discussion ranges from "laser ignition methods for initiating a nuclear fusion reaction" to human values, environmental quality and dignity, and earthmanship.

As you read, you are immediately impressed by the format. Concepts of energy flow and recycling are woven together with good illustrations and charts. Thought-provoking quotes start each chapter, followed by excellent discussion topics and further reading lists at the end. Original guest editorials by prominent scientists heighten the interest throughout.

The chapter on present and future energy options brings together a great deal of information in concise form, comparing the "net energy" and environmental impacts of each option. Analyses of fossil fuel and nuclear energy are emphasized with separate chapters for each. The last chapter, "What Must We Do?" offers an integrated plan for the United States to deal with each phase of the energy crisis. This plan could be a useful catalyst for class discussion, guest speakers, debates and research projects.

A complete reference section closes this very impressive work. This kind of material should serve as a model for all environmental studies.

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ENERGY, EARTH AND EVERYONE, by Medard Gabel. 1975. Straight Arrow Books (625 Third St., San Francisco 94107). 160 p. $4.95 softback.

This book, which could be used as a supplementary text, reports the results of the month-long World Game Workshop held at the University of Pennsylvania during June and July 1974. The workshop sought to answer the question whether there is sufficient technical knowledge and potential energy available to supply the world's needs in 1985, assuming that the population will be 4.9 billion and that each person will require the amount of energy consumed per capita in the U.S. in 1974.

The workshop concluded that there would be sufficient energy if we begin to shift from the utilization of "capital energy sources" such as coal, oil, gas, nuclear fission and fusion to "income energy sources" such as geothermal energy, falling water, solar energy, wind, wood, ocean tides, wave currents, pressure and temperature differentials, and energy generated by microorganisms. Obviously reliance on income energy sources is greatly preferable because these will be available to future