

fications are explored. These related studies include reproductive biology, population estimates, transmission of diseases, other ecological relationships, and behavioral repertoires of both species. Inter- and intraspecies social behavior is emphasized. Over 100 references are cited and background information is given.

Most notably, the reader is taken "behind the scenes" to see how study techniques were developed, what difficulties were encountered, and how on-site observations led to new questions and hypotheses. A large number of these hypotheses were tested using appropriate methods and statistical designs. Often assumptions and speculations are given, but these are usually identified as such.

Turner is a creative, probing researcher and a lucid writer who allows the reader to vicariously experience a field study in the tropics. Teachers and graduate and undergraduate students could read the book for pleasure. Those interested in research would especially profit from it. Advanced high school students might enjoy the content, but some knowledge of classical ecology, advanced vocabulary, and statistics would be necessary for smooth easy reading.

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CROWDING AND BEHAVIOR, by Jonathan L. Freedman. 1975. Viking Press (625 Madison Ave., New York 10022). 177 p. \$7.95 hardback.

What is crowding? Chapter 1 answers this rhetorical question with a measurable definition: "[Crowding is] the amount of space available per person." Reducing this powerful word to such simplicity is, even for research purposes, troublesome enough; but in addition, the reader frequently must contend with whether "space" refers to a measurement of area or to one of volume.

The author's research supports two major conclusions: that there is no relationship between crowding and social pathology; and that high density intensifies the typical reaction towards other people whether that typical reaction is toward the positive or toward the negative. Chapters 7 and 8 describe the research in a manner that

is concise yet easily understandable. Along with the supporting appendixes, they make the book an important reference for college courses on overpopulation, crowding, and related issues.

Unfortunately, the rest of the book is best ignored. Chapter 4, "From Mice to Men?," is in very poor taste. It contains a succession of cheap shots at two supporters of rival theories: Robert Ardrey (*African Genesis; Territorial Imperative*) and Desmond Morris (*The Naked Ape*). The author's summary of their work, "Minor inaccuracies . . . — which a scientist tries to avoid—creep in unless a writer is an expert in the field in which he is writing" is a better commentary on himself. His statements with regard to natural selection are reminiscent of creationist thinking, and the concluding chapters on urban design clearly stretch the author's abilities. (He is a psychologist.)

The most frustrating aspect of this book is the author's tendency to comment with obvious truisms that have little direct relationship to the argument at hand; for example, "Although it is not guaranteed in the constitution [sic], the right to cheap transportation for everyone must be an important goal of society." This usage is pervasive throughout the initial chapters and only disappears when the author is on home ground with his own research.

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### Ecology and Environmental Biology

ECOLOGY: THE LINK BETWEEN THE NATURAL AND SOCIAL SCIENCES, by Eugene P. Odum. 2nd ed., 1975. Holt, Rinehart & Winston (383 Madison Ave., New York 10017). 244 p. Price not given.

The second edition of *Ecology*, like the first, is a must for every biology, conservation, and environmental science teacher. This edition presents many new examples and results of Odum's recent investigations.

Once again, Odum's forte is his ability to present the principles of ecology in easily understandable terms. In treating human ecosystems, Odum discusses them in an energy-flow context showing

how dependent we are on our environment and how delicate the balance is. Odum warns time and again that ecological problems are complex and as such do not have simple answers. He gives many examples of the impossibility of solving one problem by implementing one solution alone as we have done so often in recent years. He emphasizes that regional planning and research are necessary before decisions can be made that will affect our lifestyles. Odum proposes, then, that economic and ecological values are so interconnected now that the world should shift its measure of the value of goods and services to energy units instead of dollars and cents. As a result, citizens would see the true cost in energy units of maintaining their lifestyles.

For someone who is not an ecologist, yet wants a good introduction to the subject, this publication covers the big ideas of the field and relates them to the individual's and society's survival. General readers, however, may find the cross-references in the text from one chapter to another annoying. Also, there are several misspellings and typographical errors that are at times distracting.

For those readers familiar with Eugene Odum's collaborative effort with his brother, Howard, on the classic *Principles of Ecology*, you will see much that is similar but in a more readable form employing examples that are meaningful to a wide audience.

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LIFE IN AND AROUND FRESHWATER WETLANDS, by Michael J. Ursin. 1975. Thomas Y. Crowell Company (666 Fifth Ave., New York 10019). 116 p. \$6.95 hardback, \$2.95 softback.

Intended as a handbook for biologists and students of natural history, this book covers organisms that could possibly be found in marshes, bogs, and swamps of temperate North America east of the Mississippi. Included are 98 pages of range maps, classifications, and line drawings of these organisms as well as 16 pages of excellent, full-color photographs.

The survey is meant only as a brief guide and does not include every species. The range maps tend to cover more territory than promised and the classifi-