The authors are to be commended on their excellent treatment of evolution, including human evolution.

Both a student's guide (by Robert Kalinsky) and instructor's manual (by Holt Harner) for the textbooks are available.

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BIOLOGY

by William A. Jensen, Bernd Heinrich, David B. Wake, Marvalee H. Wake, and Stephen L. Wolfe. 1979. Wadsworth Publishing Company (Belmont, California 94002). 651 p. Price not given.

The textbook, *Biology*, treats well the subject its title simple declares—it provides a well-rounded, appealing study of biological concepts and processes from the atom to the ecosystem. Written by a complimentary team of specialists, reviewed by a panel of biology professors from across the country, the book maintains a level of freshness throughout its readable passages for any two-semester college introductory biology course. Written this past year, its core is current, yet traditional in organization. The book illustrates biology in the real world through extensive use of special essays and supplements (many of which are excerpts from scientific papers), which attempts to "kindle" interest in biological investigations close to the frontiers of science.

The main chapters cover the following areas: the cell; genetics; development; organism form and function; ecology; population biology and evolution; and the origin and diversity of life. This sequence resembles somewhat the traditional units in an introductory biology text, but the treatment of the subject varies markedly from that found in the college texts of the early 1970s. The current treatment reflects the authors' view of changing emphases in biology teaching today—a few examples. Neither the section on evolution nor diversity of life discusses human evolution (and there are not even any pages on the subject retrievable from the index)—a notable omission—although there is a substantial discussion of the population ecology of humans in a supplement section. The unit on taxonomic diversity of life is relatively reduced to brief discussions (the section on the fungi kingdom is especially dry) of the five kingdoms, in contrast to treatments in other textbooks. The treatments, however, on cell biology (protein synthesis, mitosis, meiosis, cell energetics) and photosynthesis are extensive—the discussion of the "Krebs Cycle" and cellular metabolism often seems to be more than a beginning student in biology ever wishes to know. As such, the authors lay out the biochemical framework for understanding cell structure and function. An area often short-changed in other texts, biogeography, is given a lively discussion here, especially the segment relating divergence and adaptive radiation to the break-up of Pangaea and Dowdwanaland. But the authors, like writers of similar texts, give only short treatment to soil and then only in relation to plant nutrition. The rest of the units are comprehensive and cohesive.

Typographically, the book is well designed, with a readable typeface and layout. A major drawback, however, is the exclusive use of either one or two-tone color drawings and few photographs. Many of the drawings are well-done and clearly captioned, but photographs often lack contrast. The glossary and index are fairly extensive, although there are a number of common terms not found in one or the other.

Overall, this book would serve the needs of the introductory biology course. According to the publisher, an articulated laboratory manual, student study guide, and instructor's manual are also available—they were not reviewed.

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BIOLOGY: TODAY AND TOMORROW

by Jack A. Ward and Howard R. Hetzel. 1980. West Publishing Company (50 West Kellogg Boulevard. St. Paul 55165). 576 p. Price not given. Accompanying *Laboratory Manual*, by authors, 206 pages, and *Study Guide*, by Kenneth R. Schrankel, 190 pages. Prices not given.

This textbook provides a broad background in introductory biology for the one-term college course for students who do not intend to major in biology. It attempts to be a compromise in that it is neither an encyclopedia of facts nor a comprehensive treatment of all aspects of modern biological principles. It also attempts to demonstrate the intricate balance between people, nature, and the environment.

The book is organized into seven sections and twenty-six chapters. Each section begins with an historical background from which biological principles are then presented, using relevant examples to illustrate and direct student attention. There is a definite human orientation built, for the most part, on a good coverage of basic biology.

The "Introduction" section includes a chapter on basic chemistry at a level appropriate for the book's intended audience. The section "Cells and Organisms" provides background into cell structure (prokaryotic and eukaryotic versions), cell function (photosynthesis, cellular respiration, and membrane transport), cell reproduction (mitosis and meiosis but without discussion of DNA structure and replication), human structure and function and flowering plant structure and function. Organismal reproduction is covered in the "Reproduction" section and, in contrast, deals with the modes of reproduction in a variety of organisms—from the Paramecium to worms, mosses, and ferns. Two separate chapters are devoted to "Human Sexuality and Reproduction" and "Birth Control." A chapter on "Vertebrate Development" concludes this section. A complete discussion of DNA is included with the material on molecular genetics, which follows a good treatment of Mendelian genetics in the "Genetics" section. A chapter on "Human Genetics" concludes this section. The section on "Evolution" presents an adequate view of the nature and mechanisms of evolution. It concludes with chapters on "Our Primate Heritage" and "Human Evolution." "The Environment" section presents an appropriate view of the earth's environments, including both aquatic and terrestrial ones, and the topics of energy flow and nutrient cycles. It concludes with a chapter dealing with the influence of the human population on these environments. The last section on "Animal Behavior" provides a treatment of animal and human behavior that is perhaps more extensive than one would expect in a book of this nature. The diversity of organisms is briefly covered in the Appendix.

Special features of the book include a good cross-referencing of topics from one chapter to another. Each chapter includes one or more short essays on relevant topics and concludes with a summary, discussion questions, and a special essay "The Next Decade." The latter essays attempt to forecast the future on the basis of current biological information as presented in the chapter; examples include the "Continuing Search for Life," "Questioning Childbirth" and "Biological Pest Control." A good glossary is available.

As in most first editions, this book suffers in several areas. Most illustrations are appropriate and meaningful, a few, however, can give students false im-