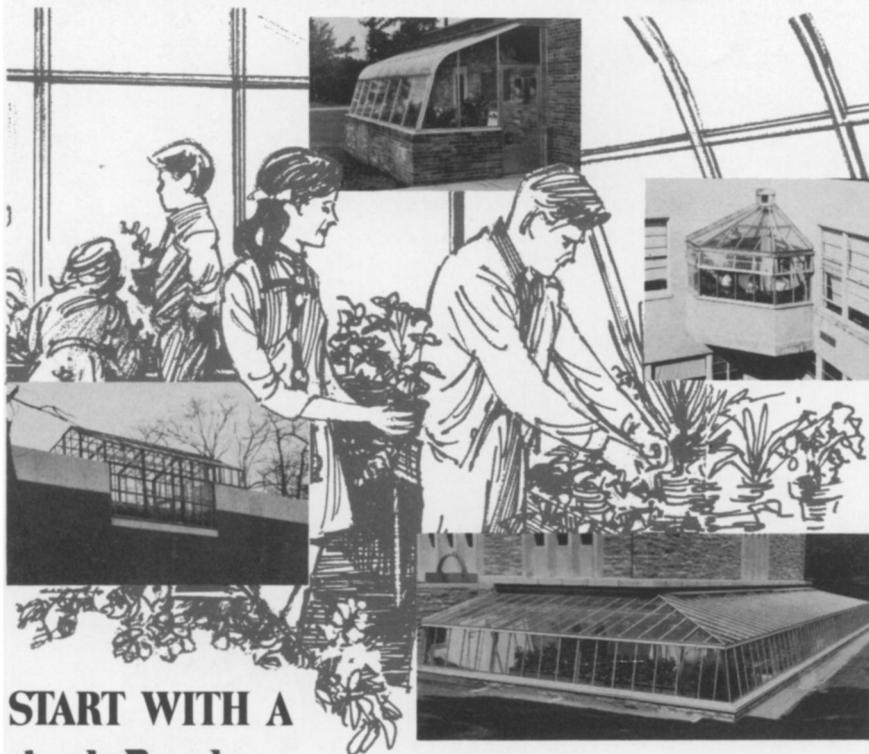


The most *effective* way of teaching biological & life sciences...?

(Agriculture, agronomy, botany, biology, biochemistry, ecology, microbiology, horticulture, zoology)



START WITH A Lord & Burnham LIFE SCIENCES LABORATORY, OF COURSE!

Isn't a professionally-designed and properly-equipped greenhouse-laboratory indispensable in order to support a meaningful teaching program *at any level*? As the foremost designer and manufacturer of glass structures in the country, Lord & Burnham specializes in providing the precise laboratory facility you need . . . for every type of educational and research institution. A variety of standard types offers a wide latitude of choice as to size, configuration, and cost. Or a custom-designed laboratory is preferable to meet some special purpose or architectural requirement. Either way, send for our free folder on Life Sciences Laboratories. If you have a special problem or unusual situation, please call the sales department at our main office or your nearest branch office — entirely without obligation of course.



SECOND CENTURY OF GLASSHOUSE LEADERSHIP

IRVINGTON-ON-HUDSON, N.Y. 10533

CALIFORNIA Hayward 94545 / (415) 782-6236 ■ CONNECTICUT Cheshire 06410 / (203) 272-5321
ILLINOIS Des Plaines 60016 / (312) 824-2181 ■ MASSACHUSETTS Belmont 02178 / (617) 484-2716
NEW YORK Irvington-on-Hudson 10533 / (914) 591-8800 ■ NORTH CAROLINA Saluda 28773 / (704) 849-3091
OHIO Elyria 44035 / (216) 327-5622 ■ CANADA St. Catharines, Ontario / (416) 685-6573

HIGH SCHOOL 1980, ed. by Alvin C. Eurich. 1970. Pitman Publishing Co., New York. 304 pp. \$8.50.

The Academy for Educational Development sponsored this collection of 23 essays, which assess the prospects of constructive adaptations by American secondary education to social, environmental, and technologic changes. The authors, who are leading educators, examine the reforms that are possible and necessary in future.

The book is not prophetic, despite its somewhat presumptuous title. It is an attempt at planning. As such, it is a sober projection for the next decade. Examples of possible undertakings are as follows: equalizing educational opportunities, particularly for the urban poor (Harold Howe, II; Samuel M. Brownell); upgrading vocational education with a recognition of variability in learning styles (Marvin J. Feldman); maintaining the comprehensive high school as relevant to the needs of 1980 (James B. Conant); applying new instructional technology, such as computers (Douglas B. Dillenbach, J. Lloyd Trump, John M. Loughary); and revising administrative procedures (Lloyd S. Michael), teacher certification (Charles E. Brown), and evaluation techniques (William W. Turnbull). Noteworthy for the biology teacher is the essay by Paul F. Brandwein on the science curriculum. The rise of private academies, industry-based education systems, the Housing and Urban Development Act of 1968, and urban economic segregation are viewed as challenges to the high school.

There is only one essay devoted to the complex problem of the resistance to change that too often characterizes students, teachers, administrators, and the public. Anthony F. Oettinger concludes that 10 years from now schools will be much as they are today. His essay serves as a needed antidote to the restrained optimism that otherwise pervades the book. Nevertheless, the fact that this book is published may augur well for the future of American secondary education.

High School 1980 deserves study by those who are organizing new schools and curricula and by teachers who are willing and able to adjust to change.

Richard P. Aulie
Chicago State College

Environment

OUR PRECARIOUS HABITAT, by Melvin A. Benarde. 1970. W. W. Norton & Co., New York. 362 pp. \$6.95.

The dust jacket adds a subtitle: "An Integrated Approach to Understanding Man's Effect on His Environment." Often the stress is more on the effect

of the environment on man, as in the discussions of diseases contracted from man's surroundings.

The message is documented and restrained. At a time when the woods are full of preachers, prophets of doom, alarmists, and gushing emotionalists, Benarde brings us relief. He presents the problems calmly and clearly, analyzes them objectively, and helps us to see them in balanced perspective. He is at his best when describing diseases he knows, as a public health physician. Sometimes he gives little more than a catalogue of the characteristics of the diseases, and he frequently forgets his audience and uses unfamiliar technical terms. (Actually, this "failing" may add to the appeal of the book for students with some background in biology.)

Benarde points out how baffling these environmental problems are for the scientist. The scientist is accustomed to altering one factor during an experiment: by one or more such trials he succeeds in ferreting out a cause. Most of our environmental problems cannot be unravelled that way, because they are knotty and full of interlocking factors. Patience and multivariant techniques are required to solve them. For instance, the idea of solving the air-pollution problem by putting an immediate stop to particle emission from power plants and incinerators fails to recognize our need for power and for the elimination of solid wastes.

The reading of this authoritative, thoroughly scientific review will be rewarding to students, teachers, and lay adults alike—especially if one has already read some of the "inflammatory" books. However, the author's effort to be objective (on radiation, for instance) sometimes leaves an impression of complacency about the problem, and this may be as dangerous as the approach of the alarmist.

John A. Behnke
New York City

History

TOWARD A HISTORY OF GEOLOGY, ed. by Cecil J. Schneer. 1969. M.I.T. Press, Cambridge, Mass. 475 pp. \$22.50.

After the publication of *The Origin of Species* many major geologic concepts won acceptance "on the strength of the inspiration that was the theory of evolution," Schneer says. This statement sets the interdisciplinary tone that should make this book interesting to practitioners, teachers, and students in all scientific disciplines.

The volume consists of papers presented in 1969 at the New Hampshire Interdisciplinary Conference on the History of Geology, sponsored by the Council on Education in the Geological Sciences with the support of the Na-

SWIFT Stereo 80 Series —

makes BIG ONES out of little ones with highly professional microscope performance

Stereo 80 HBA



Professional performance, well within the range of tightened school budgets, is what makes Swift Stereo 80 an odds-on favorite with the science teaching fraternity. The entire concept of Swift Stereo 80 design—from optical system to mechanical features—resulted from a survey of the needs and wants of the finest school laboratories in the country. Every desired feature was scientifically engineered into the instrument to provide maximum capabilities at minimal price.

Swift Stereo 80 gives you the widest choice of magnifying powers available, ranging from 10x to 120x. Objectives bring you the widest, flattest field of

viewing—from 8.8 to 17.5 mm, depending on magnification. Highest quality prisms (NOT mirrors) are separately clamp-mounted (NOT cemented) to their shelves. Achromatic, widefield eyepieces are coated to increase light transmission; locked in to prevent tampering, but are removable for cleaning; designed to accept eyepiece measuring scales, and have diopter adjustment on right eyetube.

Write or call today for literature describing the unique tri-illumination, advanced mechanical design, and various accessories, plus name of your nearby Swift dealer for a demonstration.



SWIFT INSTRUMENTS, INC.
Technical Instrument Division
SAN JOSE, CALIFORNIA 95106 • 408/293-2380

SWIFT AGENCIES throughout the U.S. and in South Africa, Australia, Belgium, Canada, Denmark, England, Finland, Holland, Ireland, Korea, Italy, Lebanon, Malaya, Mexico, Nepal, Norway, East Pakistan, West Pakistan, Sweden, Thailand.

tional Science Foundation. Each contributor writes about a scientist (or a group of scientists) of importance in pre-*Origin* days; the result is a fragmentary but well-documented discussion of Darwin's immediate predecessors and of the ideas that were abroad in Darwin's time. These ideas must have deeply influenced him: one recalls the cherished copy of Lyell's *Principles of Geology* that he carried on the *Beagle*.

The interdisciplinary nature of the book is seen, too, in the varied backgrounds of the contributors. Of the 26 authors, four are primarily geologists, nine have published widely in both geology and the history of geology, two

are historians of biology and medicine, one is a museum curator, and one is a metallurgist. Certain chapters are of peripheral interest to biologists, but 17 of them are fully relevant. The articles on Saint-Hilaire vs. Cuvier, by F. Bourdier; on Scheuchzer and *Homo diluvii testis*, by M. Jahn; and on the Dana-Lewis controversy in America on evolution, by M. Sherwood—these deal almost entirely with paleontology, paleobiology, and pre-Darwinian ideas of the development of life and of species. The names of Linnaeus and Lamarck come up again and again: Linnaeus, although primarily a systematist of organisms, also created a classification of the "mineral kingdom."