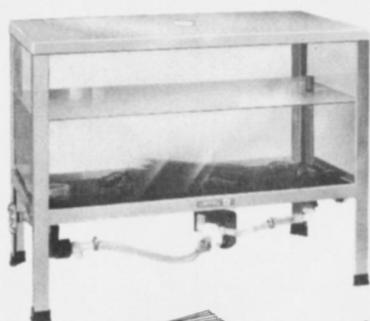


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Qualitative Test for Nitrogen Dioxide
Sulphur Dioxide and Structural Materials
Nitrogen Dioxide and Structural Materials
Sulphur Dioxide and Live Materials
Nitrogen Dioxide and Live Materials
- WATER ENVIRONMENT**
Water Hardness
Suspended Particles in Water
The Environmental Studies Chamber for Water Studies
Characteristics of Local Water Sources
Purification of Water
Detergent Effects upon Live Materials
Eutrophication
- SOIL ENVIRONMENT**
Soil Characteristics
Biodegradable versus Eternal Micro-organisms in Soil

planet that we call home. This book is based on the premise that a student can best arrive at an appreciation of the larger issues related to biology through a study of related basic principles. The style, content, and level of sophistication are directed toward the nonbiology major. An emphasis on ease of comprehension should not prevent a consideration of some of the traditionally "difficult" topics such as those related to the general field of molecular biology. If such topics as DNA and energy transfer are approached with care, the student can gain a useful degree of understanding as well as a grasp of the significance of the principles involved. The main objective of this book is to help the student attain a degree of biological sophistication through the study of a few selected basic principles, with applications to the larger issues of which they are a part. The text has an accompanying Instructors Manual that gives extensive references and provides capsule answers to discussion questions at the end of each chapter. Materials related to human sexuality are extensive and well written. To the teacher using this as a one-semester advanced biology text, caution should be used when community standards relative to birth control, sexual presentation, and related moral issues on abortion and family planning are conservative. There is ample material for a one-semester course, which allows the individual teacher freedom to pick and choose topics to be emphasized. This is one of an increasing number of good one-semester textbooks for the nonscience major. There is a delicate balance between fast-moving, attention-keeping writing style and the more matter-of-fact "science-text" style; the individual must decide the preferred level. One-semester books like this could be produced in paperback editions with reduced cost to the student.

James D. Schwengel
William Henry Harrison
High School
Evansville, Indiana

Teacher

The true teacher defends his pupils against his own personal influence.
Amos Bronson Alcott

The child's third parent.
Hyman Maxwell Berston

The man who can make hard things easy.
Ralph Waldo Emerson

One who makes two ideas grow where only one grew before.
Elbert Hubbard

The candle which lights others in consuming itself.
Giovanni Ruffini

(Those who) liberate American citizens to think apart and to act together.
Stephen S. Wise

History and Philosophy

THE GENESIS STRATEGY: CLIMATE AND GLOBAL SURVIVAL

Stephen H. Schneider. 1976. Plenum Press (227 West 17th St., New York 10011). 419 p. \$14.95 hardback.

The simplistic mind probably believes that with a welter of books on the human predicament a new one must surely repeat the same old song and be better left unwritten. Even marginally into *The*

Genesis Strategy, it is very clear that such is not the case, illustrating a major thesis of the book: we must prepare for the unlikely. Humankind's predicament is so complex, however, that the book has a number of themes: hunger, poverty, population pressures, energy crises, social disruptions, etc.

Schneider has tackled the biggest subsection of the predicament—the fact that humans may be on the threshold of global climatic change, brought about by human actions or as yet unfathomed natural changes.

The book's title, *The Genesis Strategy*, refers to the biblical account in which Joseph, interpreting a dream, advised the pharaoh of seven years of plenty to be followed by seven years of famine. The strategy then was to lay away stores during the period of abundance for use during the succeeding years—with eminently successful results.

Schneider lays no claim to foretelling even for a single year that crops will fail, but he does point to the well attested record, both recent and for the distant past, of individual seasons of failed crops and of "little glacial periods," to show that the fluctuations observed are great enough that food demand may not be met in some years, especially when, as now, need equals or exceeds supply in many areas. The author basically has two recommendations: always maintain diversity and always maintain a safe margin of reserves. Fluctuations in supplies are minimized with diversity, and it is the fluctuations themselves that at present exacerbate our problems—as was well illustrated by recent variations in flow of petroleum and food. Reserves, of course, are obviously to stabilize supplies through the lean periods and at the same time moderate price fluctuations, which are especially critical for impoverished families and nations.

The final chapter offers suggestions for action, including new institutions dealing with impending disasters, resource availability, alternative technologies and policy options—perhaps these could be called collectively an early warning system—a fourth branch of government "to assess the probabilities for and timing of future 'improbable' disasters," a function the author finds missing in the present American bureaucracy, and other concepts that should receive wide consideration.

The Genesis Strategy is well written and understandable and deserves careful reading by everyone concerned about human global predicaments. For many, it may well serve also as an introduction to the author's specialty, climatology, and provides sufficient references to allow the reader to pursue the subject further. My

one regret concerning this book is the substandard index. Such key words as albedo, nitrogen, thermal balance, and carbon dioxide do not appear in the index and "tropics" has only the notation "see countries, subjects." In a subsequent printing this should be corrected.

John A. Freeman
Winthrop College
Rock Hill, South Carolina

Physiology

HUMAN ANATOMY AND PHYSIOLOGY

by James E. Crouch and J. Robert McClintic. 2nd ed. 1976. John Wiley & Sons, Inc. (605 Third Avenue, New York 10016). 809 p. \$17.50.

This college-level human anatomy and physiology textbook, now in its second edition, will truly establish itself, as did the first, as one of the more popular textbooks available. The textbook is intended for use by a variety of students taking their first anatomy and physiology course. It is particularly well suited for those students in the allied health fields or physical education. In addition, it would serve as a useful reference and be a welcomed addition to the personal library of all introductory biology teachers both at the secondary and college level.

The authors state that the major aim of the text is to "fill a part of the knowledge gap in our understanding of our body and its behavior, and to give a variety of students a sound and interesting background in human development, anatomy, physiology, and elementary pathology." They do an excellent job in achieving their aims. For example, the authors have done an excellent job in their correlation of the various aspects of the anatomy, physiology, and pathology of the human organism. Most notable is their technique of including embryological discussions at the beginning of each chapter rather than as a separate chapter. The authors state, "thus, the reader achieves an appreciation of how congenital anomalies may develop, and how to recognize deviation from normal, be they structural or functional"; and I would agree.

This second edition goes beyond minor revisions; the authors have not only carefully updated the text but several of the chapters have been almost completely rewritten, and new chapters on muscle structure and physiology and on circadian rhythm have been included. Also, the chapter on the nervous system (which was rather lengthy in the first edition) has been condensed into several shorter ones.

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