



Book Reviews

Michael Emsley

Department Editor

FRONTIERS OF SCIENCE



On The Frontiers of Science: How Scientists See Our Future. Contributing editors: Nigel Calder and John Newell. 1989. Facts on File, (460 Park Ave. South, New York, NY 10016-7382). 248 pp. Cloth \$35.

If you picked up a book with such an ambitious title, what would you expect to see in the Table of Contents? The sky is obviously the limit, or is it? Certainly not if you are in the realm of space exploration, the subject of the futuristic graphic on the cover of this book. The introductory section on space covers the entire gamut from the pure research of Stephen Hawking's "Theory of Everything" through more traditional astronomy to the ultimate destiny of humankind with Capt. Kirk and Mr. Spock at the helm.

From space, the book moves inward to cover four more earthbound themes: Earth, Body, Mind and Humanity. The first of these, Earth, focuses on how technology has revolutionized the study of ecology, both in space and time. This has resulted in the birth of a fledgling science—"Planet Management." The Earth section concludes with a look at the myriad of possibilities that genetic engineering promises to unfold. This investigation leads naturally into the Body, which includes a discussion of disease, longevity, "fringe" medicine

and how the mind and body may be able to interact to help fight disease. Mind focuses on memory, language and psychiatry, while the concluding theme, Humanity, investigates the limitations of humans and ingenious ways to replace some of our roles with robotics.

One basic observation that I would make about this book is that it is about people and life, with technology woven in. It is not, thank goodness, a glorification of technological fixes to all of life's problems. Though the oft-repeated statement, "Science will have to find new ways to . . .," is frustratingly common, it at least leaves a solid impression of science's limitations. The book is also very readable, with lots of colorful illustrations, and is not just another stuffy, dust gathering reference text.

In addition to the two contributing editors, there are 20 or so contributors and advisers, most of whom are British. This is obviously a U.S. edition of a British publication, and many of the examples used in the book are British or European, although North America is well represented.

This book may be too broad in scope to compete successfully for your personal book budget, especially considering that its lavish presentation makes it fairly pricey. However, it would seem to be an excellent prospect for a library collection.

Peter Colverson
Mohawk Valley Community College
Utica, NY 13501-5394

Michael Emsley is editor of the Book Reviews section of *ABT*. He is professor of biology at George Mason University and sits on the editorial board of the George Mason University Press. Emsley, who holds a B.S. and Ph.D. in zoology from the University of London, is an insect taxonomist currently working on a project to identify and classify a genus of katydids found only in Central and South America. The project, begun in 1958, includes examining the sound producing mechanism of the insects. Emsley is the author of *Butterfly Magic*, *Insect Magic* and *Cloudforests and Rainforests*. His address is: **Biology Department, George Mason University, Fairfax, VA 22030.**

TREES



A Reunion of Trees. The Discovery of Exotic Plants and Their Introduction into North American and European Landscapes. By Stephen A. Spongberg. 1990. Harvard University Press (79 Garden St., Cambridge, MA 02138). 270 pp. Hardcover \$35.

Botanical exploration and explorers, introduction of exotic trees and the history of the Arnold Arboretum are the themes of *A Reunion of Trees*. The

book is authoritative and accurate, written by a horticultural taxonomist for the Arnold Arboretum who participated in an expedition to China by invitation of the Chinese Academy of Science.

Wherever explorers went, botanists accompanied them, for each new area of the earth had new trees. These trees could have horticultural or ornamental uses in the Western world.

The subtitle notwithstanding, the subject of *Reunion* is the Arnold Arboretum: its history, botanists and trees. However, the narrow focus does not detract from the effectiveness of the book. The Arnold Arboretum is among the most prestigious arboreta of the world; its directors have been leading horticulturists of the day and its expeditions among the most important.

As he relates the excitement of the botanical explorations, Spongberg describes the notable trees that were discovered. The Bald Cypress, a native of the southeast U.S. wetlands, was the first American tree to be cultivated, and it is on prominent display in the arboretum. The book ends with the recent addition of the Dawn Redwood to the arboretum. This close relative of the Bald Cypress was discovered growing in a remote Chinese forest in 1941. Paradoxically, although restricted to a forest in China that had never been visited by Western botanists, it had a scientific name. How could this be? Seven years earlier it was described from 5 million-year-old fossil remains. When notified of the discovery of this "living fossil," the arboretum financed an expedition to collect seeds, which it then distributed to hundreds of institutions around the world. Now this tree flourishes in public and private gardens.

Reunion is a beautiful book, liberally illustrated with photos, reproductions of botanical drawings and maps. The editing is meticulous; the only discrepancy I found was minor (the death date of Andre Michaux is 1803 on p. 43 and 1802 on p. 53).

With the eight-page bibliography and detailed index of personal names and plants, this book serves as a reference