

The Immortal Fire Within: The Life and Work of Edward Emerson Barnard, William Sheehan. 1994. Cambridge University Press, New York, NY. 336 pages. ISBN: 0-521-44489-6. \$49.95.

This first full-length biography of Edward Emerson Barnard tells the remarkable tale of endurance and achievement of one of the leading astronomers of the late nineteenth and early twentieth century. As "a man who was never known to sleep," Barnard scoured the heavens endlessly, leaving an astonishing legacy of observations that make him one of the greatest observers of all time. This book traces Barnard's life from impoverished origins to status as an internationally recognized astronomer. His success as a professional astronomer unfolds in 1842 as he discovers the fifth satellite of Jupiter (the first since Galileo) and pioneers wide-angle photography of the Milky Way, which leads to the recognition of dark nebulae - clouds of dust on the galactic plane. Beautifully illustrated throughout, this book provides a complete history of Barnard's fascinating life and work, based largely on previously unpublished archival material, that will be of interest to astronomers and historians of science.

Notable Twentieth-Century Scientists, Emily J. McMurray. 1994. Gale Research, Detroit, MI. 650 pages. ISBN: 0-8103-9181-3. \$295.00.

The scientists profiled in *NTCS* represent this century's most prolific and productive contributors, both living and deceased. Focus is predominantly on the individuals whose scientific achievements are relevant to today's society. The four volume set includes scientists from around the world, with coverage on more than 225 women scientists; nearly 150 Asian-, African-, Hispanic- and Native American scientists, and nearly 75 scientists from countries outside North America and Western Europe. Students and researchers now have a reliable, current resource for biographical data on those individuals who are often overlooked in similar publications.

The book's nearly 1,300 entries are arranged alphabetically across the four volume set to help researchers locate specific individual quickly. Additional access to entries is available through four indexes: Subject/Scientist, Gender, Field of Specialization and Nationality/Ethnicity.

Each 750-2,500 word essay provides personal and career information on the featured scientist, and includes a list of major writings resources for further information, and, when available, a personal statement from the scientist. Approximately 400 photos are included, as well as a general bibliography of sources on scientists, and a time-line of scientific achievement.

BIOLOGY AND LIFE SCIENCES

Biographical Dictionary of the History of Technology, Ian McNeil and Lance Day, Editors. 1995. Routledge, New York, NY. 800 pages. ISBN: 0-415-06042-7. \$125.00.

For the first time, information has been gathered on the people who have made the most significant advances in technology. From ancient times to the present day, and from around the world, the major inventors, discoverers and entrepreneurs are profiled, and their contribution to society explained and assessed.

In the first part of each entry, the information includes the date and place of the subject's birth and death, together with their nationality and their field of activity. In the main body of the entry there follows an account of each person's principal achievements and significance in the history of technology, along with full details of appointments and honors. Finally, an annotated bibliography directs the reader to the subject's principal writings and publications and to the most important secondary works which the reader can consult for further information.

The Biophilia Hypothesis, Stephen R. Kellert and Edward O. Wilson. 1993. Island Press, Washington, DC. 484 pages. ISBN: 1-55963-148-1. \$27.50.

There is a quiet revolution developing in biological thought about the human relationship to nature. A decade ago, two-time Pulitzer Prize winner Edward O. Wilson wrote *Biophilia*, a book of extraordinary intellectual elegance and challenge which suggests that our affinity to all living things is a biological need, necessary for our physical, mental, and spiritual well-being. Since then, the richness of this idea has captured the imaginations of our most creative and distinguished scholars from such diverse fields as biology, philosophy, psychology, and anthropology.

The Biophilia Hypothesis is the outgrowth of an exceptional gathering of some of our best and most creative thinkers, who were invited to explore the idea of biophilia and to collaborate in the making of a path-breaking book. Topics range from the importance of animal symbolism for human language and mental development to the evolutionary basis for our sense of the aesthetic. To introduce these subjects and to elaborate on the meaning of biophilia, both Kellert and Wilson have written engaging and provocative essays.

- A Calendar of the Correspondence of Charles Darwin, 1821-1882**, Frederick Burkhardt and Sydney Smith. 1993. Cambridge University Press, New York, NY. 740 pages. ISBN: 43423-8. \$150.00.

Charles Darwin's correspondence provides a unique window on Darwin's working methods, the atmosphere of intellectual revolution of his time, and his doubts, anxieties, and false starts that are now little known. This volume is the most comprehensive catalog to date of all presently known letters between Charles Darwin and his friends and associates. The editors of *Darwin's Correspondence* give information on the source and location of each letter, as well as a brief summary of the content of each. First published in 1985 (by Garland Publishing Company), the *Calendar* has been thoroughly updated to include recently discovered material, corrected dates, and reinterpretations of known letters. These amendments and additions - 1500 in number - are all carefully listed in a new supplement. An essential reference book for all scholars of Darwin, this *Calendar* will also form a vital companion to *The Correspondence of Charles Darwin*, a multi-volume work currently in progress, eight volumes of which have already been published by Cambridge University Press.

- Children of Choice: Freedom and the New Reproductive Technologies**, John A. Robertson. 1994. Princeton University Press, Princeton, NJ. 277 pages. \$29.95.

Cloning, genetic screening, embryo freezing, in vitro fertilization, surrogate motherhood, Norplant, RU486 - these are the technologies revolutionizing our reproductive landscape, enabling individuals to conceive or to avoid pregnancy, and to plan the timing of their offspring and even control their characteristics, in ways barely imaginable a generation ago. In this wide-ranging account of the reproductive technologies currently available, John Robertson, a leading legal bioethicist, goes to the heart of issues that confront increasing numbers of people - single individuals or couples, donors or surrogates, gays or heterosexuals - who seek to redefine family, parenthood, the experience of pregnancy, and life itself. Through the lens of procreative liberty, he analyzes the ethical, legal, and social controversies that surround each major technology, then determines to what extent individuals should be free to pursue the procedures available and whether government should be authorized to restrict them.

Reproductive freedom, Robertson maintains, has traditionally been a right taken for granted. Yet these new technologies, helpful as they may be to many people, carry a price - be it the financial, physical, or emotional strain that in vitro fertilization places on couples or the social danger posed by genetically shaping offspring characteristics. They also open up a multitude of fascinating legal questions: Do frozen embryos have the right to be born? Should parents select offspring traits? May a government make long-acting contraceptive compulsory for welfare recipients? Should a woman have the right to abort so she can provide fetal tissue to others, either altruistically or for financial gain? If one member of a lesbian couple has a child through artificial insemination, does the nonbiological parent have any rearing rights or duties in the event that the relationship ends?

Robertson examines the broad range of consequences of each reproductive technology and its possible ethical and legal implications. He establishes guidelines for its use by weighing the chance that the technology may enrich and give meaning to an individual's life, against the harm it may cause the larger community. Arguing for the primacy of reproductive freedom in most cases, Robertson offers a timely, multifaceted analysis of the competing interest at stake for patients, couples, doctors, policymakers, lawyers and ethicists, and shows how they can best be reconciled.

- Einstein Lived Here**, Abraham Pais. 1994. Oxford University Press, New York, NY. 282 pages. ISBN: 0-19-853994-0. \$25.00.

In 1982, Abraham Pais's acclaimed biography of Albert Einstein, *Subtle Is The Lord*, captured audiences and critics alike as it brought to the surface a first-hand account of the great physicist's life.