

## SOURCES

individuals such as P.T. Barnum, Alexander Graham Bell, Melvil Dewey, Emily Dickinson, Dorothea Dix, Cyrus W. Field, Geronimo, Eli Lilly, Levi Strauss, Mark Twain, and Victoria Woodhull among over a hundred others.

While the encyclopedia includes an “A–Z Contents” section with the correlating page numbers, I wish the “Topic Finder” section also included page numbers; although if you were to find an entry to look up in the topic finder, it wouldn’t take too much effort to go to the contents since they are listed alphabetically. Colleges, universities, public libraries, and high school libraries could all benefit from this work. At \$249 it is much more affordable than similar works that are listed upwards of over \$800.—*Rachael Elrod, Reference/Instruction Librarian, The Citadel, the Military College of South Carolina, Charleston, South Carolina.*

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***Encyclopedia of Invasive Species: From Africanized Honey Bees to Zebra Mussels.*** By Susan L. Woodward and Joyce A. Quinn. Santa Barbara, Calif.: Greenwood, 2001. 2 vols. acid free \$189 (ISBN: 978-0-313-38220-8). E-book available (978-0-313-38221-5), call for pricing.

The *Encyclopedia of Invasive Species*, in 2 volumes, provides a clearly presented and well-organized introduction to invasive species and, briefly, to the history of invasion science. The eighty-eight entries in volume 1 address invasive microorganisms, fungi, and animals and are arranged alphabetically within their major taxonomic groups (microorganisms, fungi, invertebrates, and vertebrates). The eighty plant entries in volume 2 are arranged by growth form categories (aquatics, forbs, graminoids, shrubs, trees, and vines). The general introduction contained in volume 1 explains what might constitute an invasive species and discusses the various issues that arise from inconsistent uses of terms to describe invasive and nonnative species. Excellent examples of the impact of invasive species of all types are presented in the general introduction, whereas a brief overview in volume 2 emphasizes invasive plants. Volume 2 contains a table of common and scientific names and several appendixes listing American species that are invasive elsewhere, laws related to prevention and management, international agreements, the IUCN’s list of 100 of the “World’s Worst Invasive Alien Species,” and a selected bibliography. Both volumes include a state-by-state list of occurrences of invasive species, a glossary, and a comprehensive index.

The 168 species included in the encyclopedia were selected in order to represent and illustrate a wide variety of invaders in the United States. Some of the species included have been present from colonial times, while others have only recently become established. Entries include species found throughout the country as well as some that are extant in only a few areas or states. In order that room could be made for invaders of all states, those states with the highest numbers of invaders such as Hawaii or Florida will not find all of their invasive species listed.

Each entry includes the following information about the

organism: native range, US distribution, description, related and similar species, introduction history, habitat, diet (for animals), life history (for animals, fungi, microorganisms only), reproduction and dispersal (for plants), impacts, management, and selected references. Black and white photographs of the organisms are present for many of the entries, and maps showing the original and invasive range are included for all. A short bibliography of recommended resources, including websites, concludes each entry. In volume 2, sidebars highlight interesting facts about the plant’s use, history, or strategies for control.

Woodward and Quinn’s work focuses on the 168 species they have chosen for inclusion. In comparison, the recent single-volume *Encyclopedia of Biological Invasions* edited by Simberloff and Rejmánek (University of California Press, 2011) contains articles on broader topics such as “integrated pest management” and “evolutionary response, of natives to invader” rather than species-specific entries. Both resources are available in print or electronic version and would complement each other in a reference collection.

While more comprehensive lists of invasive species are freely available in online databases such as the IUCN’s Global Invasive Species Database ([www.issg.org/database/](http://www.issg.org/database/)) and the National Invasive Species Information Center ([www.invasive-speciesinfo.gov/](http://www.invasive-speciesinfo.gov/)), the *Encyclopedia of Invasive Species* presents an easily digestible and well-organized “introduction to the species, issues, and management options involved with invasive animals, fungi, microorganisms, and plants” (xxxvi) and thus achieves its stated purpose. The authors also succeed in meeting their goal of writing for a general audience at the high school and college level and have produced a clear and accessible work. Recommended for high school, college, and public libraries.—*Aimée deChambeau, Head of Electronic Services, The University of Akron, Akron, Ohio*

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***Encyclopedia of Mathematics and Society.*** Ed. by Sarah J. Greenwald and Jill E. Thomley. Hackensack, N.J.: Salem, 2011. 3 vols. alkaline \$595 (ISBN: 978-1-58765-844-0). Online access included with purchase of print.

Has there ever been a mathematics teacher in a typical high school or undergraduate class that has not been asked “What is this good for? What will I ever use it for?” Examples like budgets or stating that engineering requires calculus does not dispel the skepticism. The purpose of this new and unique resource, published by Salem, is to explain “what this is good for” in surprising ways. This three volume academic work will be a general and nontechnical resource for students and teachers to understand the importance of mathematics. *The Encyclopedia of Mathematics and Society* is meant to be a source of information on the fundamental science and applications of mathematics behind our daily lives while showing how and why mathematics works and how the branches of mathematics affect our daily lives.

The 490 articles in this encyclopedia fall into one or more of the following fifteen broad categories: architecture

and engineering; arts, music, and entertainment; business, economics, and marketing; communication and computers; friendship, romance, and religion; games, sports, and recreation; government, politics, and history; history and development of curricular concepts; mathematics around the world; mathematics culture and identity; medicine and health; school and society; space, time, and distance; travel and transportation; and weather, nature and environment. The editors' criteria for the article topics to include in these categories are both practical and logical.

The front matter of volume 1 begins with a condensed table of contents of all three volumes followed by the publisher's note. Next is a page which gives information about the editors, both of whom are professors at Appalachian State University in North Carolina and have distinguished careers in academia. The introduction by the editors gives a detailed explanation of the purpose of the work and the reasons for the choices made in its creation. Especially pertinent is the fact that the articles do not teach or present detailed mathematical theory, derivations, or equations, leaving that task to the many sources for that purpose, such as textbooks and reference works dealing primarily with mathematics.

Next come two listings of articles: first an alphabetical listing of all 490 articles with the page number, followed by another list in which the articles are arranged by category. Finally is the list of article contributors, who come from small and large institutions from all over the world. The contents and alphabetical list of articles appear at the beginning of all three volumes. The last volume also includes at its end a Chronology of Mathematics, a bibliography, a glossary, and an extensive index.

Articles include "Brain," "Predicting Divorce," and "Martial Arts"—articles of astonishing choice and variety. Usually ranging from one to four pages, articles begin with a title, category, fields of study involved, and a brief summary. At the end of each, there are references for further reading, suggestions for related articles, and the name of the author. There are some biographical articles which were chosen to highlight the diversity of individuals who contributed to the included topics. This encyclopedia will be added to Salem History, this publisher's online historical database; thus most articles do emphasize historical aspects. Rather than being oversimplified, the information and the mathematics are comprehensive while still remaining accessible and understandable.

There are no obvious works with which to compare this publication. Of course, there are many encyclopedias and dictionaries of mathematics, some meant for advanced work, others for the beginning student. These works are heavy on formulas, calculations, and mathematical terms. James Tanton's *Encyclopedia of Mathematics* (Facts on File, 2005) is one such work often found in public libraries. It is of medium difficulty and features essays on the history of undergraduate branches of mathematics. Nigel Hopkins' *The Numbers You Need* (Gale, 1992) has the same idea and a similar purpose, but at three hundred pages, it is too brief to be compared with the present work.

*The Encyclopedia of Mathematics and Society* will be a unique and useful addition to any public, high school, or undergraduate library. Mathematics teachers will find its availability to be most gratifying. Anyone will find it interesting reading.—Dr. Nancy F. Carter, Librarian Emeritus, University Libraries, University of Colorado, Boulder, Colorado

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***Encyclopedia of Social Networks.*** Ed. by George A. Barnett. Los Angeles, Calif.: Sage Reference, 2011. 2 vols. \$350 (ISBN: 978-1-4129-7911-5). E-book available, call for pricing.

Many people probably think that "social networking" merely concerns interactions (often ephemeral ones) through online technologies. Yet the *Encyclopedia of Social Networks* shows that such media are only the most recent means of a social phenomenon that has been engaging us for thousands of years. As editor George A. Barnett explains, a social network is "a system, composed of a set of social actors . . . and a collection of social relations . . . which specify how these actors are relationally tied" (viii). Such networks can and do exist independent of technology and comprise a rich field of scholarly enquiry.

This broad outlook stems from the editor who assembled an international team of authors from academia and research organizations. Barnett himself is chair of the Department of Communication at the University of California-Davis and is a frequently cited author in the area of international communication networks. Together, they produced about four hundred entries introducing readers to many important aspects of the topic.

Besides currently-popular networks like Facebook, LinkedIn, and Twitter, the encyclopedia provides background information on many other types of social networks, including alumni networks, artist communities, dieting networks, fan networks, kinship, games communities, mothers communities, neighborhood organizations, religious communities, and more. This coverage will likely expand readers' understanding of the many social structures that operate in human lives, including their own.

Another unique aspect of this work is its emphasis on the history and cultural aspects of social networking, which extend all the way back to trade routes in Mesopotamia, Ancient Greece, and the like. A handy "Chronology" (xxxiii–xxxix) emphasizes the point. This said, there may be overkill, especially for the average undergraduate. Of more than four hundred entries, about 180 concern social networks in specific U.S. states and foreign countries. This is a boon to those interested in regional aspects but may represent a lot of extraneous material to students who don't care about Connecticut, the Czech Republic, or other locations. One also wonders if such political boundaries are still meaningful today, when the college experience, multinational corporations, sporting events, and the Internet bring people together from all over the globe.

As one would expect from a Sage publication, there are also about fifty entries pertaining to theory and methods