

E-STREAMS

Electronic reviews of Science & Technology References,
covering Engineering, Agriculture, Medicine and Science

Volume 7, No. 8 • August 2004

ISSN 1098-4399

Table of Contents

Agriculture—Animal Culture

3426. Bred for Perfection: Shorthorn Cattle, Collies, and Arabian Horses Since 1800.....Page 5

Agriculture—Plant Culture

3427. Biodiversity and Pest Management in AgroecosystemsPage 6

3428. Handbook of Processes and Modeling in the Soil-Plant SystemPage 6

Anatomy

3429. Firefly Guide to the Human BodyPage 7

3430. Physical Measurement of Bone.....Page 8

Archaeology

3431. Treasure Lost at Sea: Diving to the World's Great ShipwrecksPage 9

Astronomy

3432. Firefly Moon Observer's Guide Page 10

3433. Firefly Practical Astronomy Page 11

Biology

3434. Biodiversity Page 12

3435. Life Sciences for the 21st Century..... Page 12

Botany—Seagrasses

3436. World Atlas of Seagrasses Page 14

Computer Science

3437. Beowulf Cluster Computing with Linux..... Page 15

3438. Software Engineering Handbook..... Page 17

3439. Tools and Environments for Parallel and Distributed Computing..... Page 19

Engineering—Chemical

3440. Modern Polyesters: Chemistry and Technology of Polyesters and Copolyesters.... Page 19

Engineering—Electronics

3441. High-k Gate Dielectrics Page 21

Engineering—Energy

3442. Alternate Energy: Assessment and Implementation Reference Book..... **Page 21**

Engineering—Geological

3443. Numerical Analysis and Modelling in Geomechanics **Page 22**

Engineering—Materials

3444. Metal and Ceramic Matrix Composites **Page 23**

3445. Physical Methods for Materials Characterisation **Page 24**

Engineering—Optical

3446. Optical Engineer's Desk Reference **Page 25**

3447. Photonics Rules of Thumb: Optics, Electro-Optics, Fiber Optics, and Lasers..... **Page 27**

Engineering—Telecommunications

3448. IP-Based Next-Generation Wireless Networks: Systems, Architectures, and Protocols
..... **Page 28**

3449. Wireless Data Services: Technologies, Business Models and Global Markets **Page 28**

Environmental Science

3450. Green Empire: The St. Joe Company and the Remaking of Florida's Panhandle ... **Page 29**

3451. Indoor Air Quality: A Guide for Facility Managers **Page 30**

Forestry

3452. Forest conservation Policy: A Reference Handbook **Page 31**

Genetics

3453. Genetics and the Logic of Evolution **Page 32**

Geology

3454. Quantitative Remote Sensing of Land Surfaces **Page 33**

Gynecology

3455. Reproductive Issues in America: A Reference Handbook..... **Page 33**

Horticulture—Gardens

3456. Woodland Garden: Planting in Harmony with Nature **Page 35**

Horticulture—Lilies

3457. Lilies **Page 36**

Horticulture—Maples

3458. Maples **Page 36**

Horticulture—Roses

3459. Old-Fashioned and David Austin Roses **Page 37**

3460. Reliable Roses **Page 38**

Medicine—Alternative

3461. Encyclopedia of Folk Medicine: Old World and New World Traditions..... **Page 38**

Medicine—Internal—Allergies

3462. Plant Food Allergens..... **Page 39**

Medicine—Internal—Cancer

- 3463. Complete Natural Medicine Guide to Breast Cancer: A Practical Manual for Understanding, Prevention and Care..... **Page 40**
- 3464. Culture of Human Tumor Cells..... **Page 41**
- 3465. Handbook of Cancer Risk Assessment and Prevention **Page 42**
- 3466. Handbook of Cancer Vaccines..... **Page 43**

Medicine—Internal—Cystic Fibrosis

- 3467. Cystic Fibrosis: Everything You Need to Know..... **Page 44**

Medicine—Internal—Sexually Transmitted Diseases

- 3468. Encyclopedia of Sexually Transmitted Diseases..... **Page 45**

Medicine—Internal—Viruses

- 3469. Ebola and Marburg Viruses: A View of Infection Using Electron Microscopy..... **Page 46**

Medicine—Occupational

- 3470. Encyclopedia of Work-Related Illnesses, Injuries, and Health Issues..... **Page 47**

Microbiology

- 3471. Clinician’s Dictionary of Pathogenic Microorganisms **Page 48**

Military Weapons

- 3472. Introduction to Weapons of Mass Destruction: Radiological, Chemical, and Biological **Page 48**

Natural History

- 3473. South Sea Islands: A Natural History..... **Page 49**

Nursing

- 3474. Instruments for Clinical Health-Care Research **Page 50**
- 3475. A Nurse’s Handbook of Spiritual Care: Standing on Holy Ground **Page 51**

Obstetrics

- 3476. Cesarean Recovery..... **Page 52**

Paleontology

- 3477. Fossil Frogs and Toads of North America..... **Page 53**
- 3478. Great Dinosaur Controversy: A Guide to the Debates **Page 53**

Pediatrics

- 3479. Assessing Children’s Well-Being: A Handbook of Measures **Page 54**
- 3480. Attention-Deficit/Hyperactivity Disorder: A Clinical Guide to Diagnosis and Treatment for Health and Mental Health Professionals..... **Page 55**

Pharmacology

- 3481. Clarke’s Analysis of Drugs and Poisons in Pharmaceuticals, Body Fluids and Postmortem Material..... **Page 56**
- 3482. Complete Natural Medicine Guide to the 50 Most Common Medicinal Herbs **Page 57**
- 3483. Medicinal Plants of the World: An Illustrated Scientific Guide to Important Medicinal Plants and Their Uses..... **Page 58**
- 3484. Stephens’ Detection of New Adverse Drug Reactions..... **Page 59**

Pharmacy

3485. Sociology for Pharmacists: An Introduction **Page 61**

Physics

3486. Advances in Amorphous Semiconductors **Page 61**

Physiology

3487. Adult Stem Cells **Page 62**

Psychiatry

3488. Cognitive Therapy: A Practical Guide **Page 63**

3489. Concise Guide to Evidence-Based Psychiatry **Page 64**

3490. Handbook of Narrative and Psychotherapy: Practice, Theory, and Research..... **Page 65**

3491. Handbook of Solution-Focused Therapy **Page 66**

3492. Understanding and Treating Schizophrenia: Contemporary Research, Theory, and Practice
..... **Page 67**

Public Health

3493. Encyclopedia of Health and Behavior..... **Page 68**

3494. Encyclopedia of Health Care Management..... **Page 69**

3495. Quantitative Methods in Population Health: Extensions of Ordinary Regression.... **Page 70**

Science

3496. Tapping State Government Information Sources **Page 71**

Science—History

3497. Science in the Enlightenment: An Encyclopedia **Page 72**

Surgery

3498. In a Page Surgery **Page 73**

3499. Internist's Illustrated Guide to Gastrointestinal Surgery **Page 74**

3500. Textbook of Peripheral Vascular Interventions..... **Page 75**

3501. Transplant: From Myth to Reality..... **Page 77**

Veterinary Science—Prions

3502. Prions and Mad Cow Disease **Page 78**

Zoology—Birds

3503. Birds of Northern India **Page 79**

Zoology—Vertebrate—Reptiles

3504. Reptiles of Australia..... **Page 80**

E-STREAMS

Electronic reviews of Science & Technology References,
covering Engineering, Agriculture, Medicine and Science

Volume 7, No. 8 • August 2004

ISSN 1098-4399

Agriculture—Animal Culture

3426. Bred for Perfection: Shorthorn Cattle, Collies, and Arabian Horses Since 1800, by Margaret E. Derry. Baltimore, MD, Johns Hopkins University Press, 2003. 198p., illus., bibliog., index. (Animals, History, Culture). ISBN 0-8018-7344-4. \$36.95. LC Call no.: SF199.S56D47 2003.

Subjects: Shorthorn Cattle—Breeding—History—19th Century; Collie—Breeding—History—19th Century; Arabian Horse—Breeding—History—19th Century.

Reviewer: Sara Ranger, Science Librarian, University of Houston Libraries, sranger@uh.edu

Table of Contents:

1. Developing a Modern Method of Purebred Breeding 1
2. Shorthorns and Animal Improvement 17
3. Producing Beautiful Dogs 48
4. Patterns in Collie Breeding and Culture 67
5. A World Market for Arabians Takes Shape 103
6. The Arabian Horse Registry of America: Preserving Purity 139

Concluding Remarks 156

Notes 163

Essay on Sources 183

Index 189

Bred for Perfection is a small book packed with information. It explores the breeding programs of shorthorn cattle, collie dogs and Arabian horses over the last two centuries. The reader will also gain insight into the understanding of genetics and eugenics, the development of breeding programs in general and the politics of organizations for purebred animals.

The chapters on each of the three animals could stand alone, but they do build on one another. The theme of utility versus show animals recurs throughout, as does the continued controversy of what "purebred" means in a practical world where the pedigrees of animals are not always identifiable. Derry also describes how the markets for purebred animals affect breeding as a breed gains and loses popularity. She also shows how the three breeds of animal spread from one geographical location to another.

Bred for Perfection is thoroughly researched. Derry includes exhaustive endnotes and the book is extensively indexed, especially considering its length.

Anyone with an interest in animal breeding, the development of any of the three breeds, dog fanciers, horse aficionados and those who enjoy a well-written addition to the history of science will all enjoy **Bred for Perfection**. Academic libraries with animal science, veterinary or history of science programs should have this book on their shelves and public libraries that collect in the areas of animal husbandry or history of science should also consider it.

Agriculture—Plant Culture

3427. Biodiversity and Pest Management in Agroecosystems, 2nd edition by Miguel Angel Altieri, Clara Ines Nicholls. New York, NY, Food Products Press/Haworth Press, 2004. 236p., illus., bibliog., index. (Crop Science). ISBN 1-56022-922-5, 1-56022-923-3pbk. \$79.95, \$49.95pbk. LC Call no.: SB933.3.A38 2004.

Subjects: Insect Pests—Biological Control; Insects—Ecology; Biological Diversity; Agricultural Ecology.

Reviewer: Sara Ranger, Science Librarian, University of Houston Libraries, sranger@uh.edu

Table of Contents:

1.	The Ecological Role of Biodiversity in Agriculture	3
2.	Agroecology and Pest Management	17
3.	Plant Diversity and Insect Stability in Agroecosystems	29
4.	Insect Manipulation through Weed Management	47
5.	Insect Management in Multiple-Cropping Systems	77
6.	Insect Ecology in Orchards Under Cover-Crop Management	111
7.	The Influence of Adjacent Habitats on Insect Populations in Crop Fields	127
8.	The Dynamics of Insect Pests in Agroforestry Systems	161
9.	Designing Pest-Stable Vegetationally Diverse Agroecosystems	171
	Conclusion	197
	References	203
	Index	225

This is the second edition of **Biodiversity and Pest Management in Agroecosystems** by Miguel Angel Altieri and Clara Ines Nicholls. The first edition was published ten years earlier and the authors have added a significant amount of information gleaned from the past decade's research. The second edition was necessary in part because the world has seen an increase in agricultural monocultures rather than the decrease proscribed by the authors.

The books' nine chapters lay out an effective plan for using an increase in plant biodiversity in crop fields to reduce pest damage, soil erosion and depletion and water imbalances. **Biodiversity and Pest Management in Agroecosystems** could be used as a textbook or supplementary text for many agronomy, agricultural entomology, integrated pest management or related courses. Especially helpful are the large number of clear and illustrative figures and tables, as well as the case studies at the end of the text.

The second edition of **Biodiversity and Pest Management in Agroecosystems** is highly recommended and any copies of the first edition should be replaced by the new edition. Readers should have some background knowledge in the subject area. It is a must have for college and university libraries with agriculture, ecology or entomology programs, agriculture research and extension libraries, and public libraries in agricultural communities.

3428. Handbook of Processes and Modeling in the Soil-Plant System, edited by Dinesh K. Benbi, Rolf Nieder. New York, NY, Food Products Press/Haworth Press, 2003. 762p., color illus., bibliog., index. ISBN 1-56022-914-4, 1-56022-915-2pbk. \$149.95, \$89.95pbk. LC Call no.: S596.7.H36 2003.

Subjects: Plant-Soil Relationships—Mathematical Models; Soil Chemistry—Mathematical Models.

Reviewer: Amy Schuler, Manager of Information Services, Institute of Ecosystem Studies, schulera@ecostudies.org

Table of Contents:

1.	Physical Processes	5
2.	Chemical Processes	27
3.	Biological Processes	57
4.	The Conformational Structure of Humic Substances	83
5.	Processes of Soil Formation	121

6. Radioactivity in the Soil-Plant System 149
7. Soil Acidification 177
8. Soil Alkalinization 199
9. Soil Erosion and Conservation 227
10. Soil Water Dynamics 261
11. Solute-Water Interactions 279
12. Soil-Atmosphere Interactions 313
13. Soil Organic Matter Dynamics 345
14. Nitrogen Dynamics 409
15. Phosphorus Dynamics 483
16. Potassium Dynamics 525
17. Secondary Nutrients: Sulphur, Calcium, and Magnesium 561
18. Micronutrients and Toxic Elements 589
19. Agrochemicals 627
20. Crop Growth and Development 655
21. Modeling Crop Responses to Plant Growth Regulators 693
22. Modeling: Potential and Limitations 707

Index 731

The **Handbook of Processes and Modeling in the Soil-Plant System**, edited by D.K. Benbi and R. Nieder, is intended to link soil-plant interactions with modeling approaches used by geologists, microbiologists, soil ecologists, hydrologists, and others. Each of the processes that take place in the soil-plant system – biological, chemical, soil formation, nutrient dynamics, etc. – must be fully understood before it can be modeled. It is for this reason that each chapter begins with an overview of the significance, causes and effects of each process followed by a discussion of the empirical, mechanistic and functional approaches to modeling them. Soil properties, characteristics of soil environments and soil organic matter are covered at length, with limited treatment of issues such as soil erosion and degradation. The 728 pages encompass twenty-two chapters, indicating an impressive breadth of coverage.

The use of figures, tables and other graphics support the text and the models that are presented. References follow each chapter, and an impressive index completes the book. This book is recommended to libraries that serve scientists, extension workers, graduate students and advanced undergraduates in soil science or related disciplines.

Anatomy

3429. Firefly Guide to the Human Body, by Richard Walker. Buffalo, NY, Firefly Books, 2004. 192p., color illus., index. ISBN 1-55297-879-6. \$14.95. LC Call no.: QP38.W35 2004.

Subjects: Human Anatomy—Popular Works; Human Physiology—Popular Works; Medicine, Popular.

Reviewer: April Brazill, Science Librarian, Southampton College, aabrazill@yahoo.com

Table of Contents:

Human Body	4
Cells	6
DNA and Proteins	8
Body Organization	10
Integumentary System	12
Skeletal System	14
Muscular System	28
Nervous System	34
Endocrine System	56
Cardiovascular System	60
Lymphatic System	70
Immune System	72
Respiratory System	74
Digestive System	82
Urinary System	96
Reproductive System	98

Medical Encyclopedia 112
Index 188

Walker has authored and edited several books on human biology including **Encyclopedia of the Human Body** (DK Publishing 2002), **New Atlas of Human Anatomy** (Metro 2000), and **Genes and DNA** (Larousse 2003) for all age levels. He has taught biology at the high school and university levels and was awarded the 2002 Aventis Prize for Science Books in the Junior Category.

His latest in the popular Firefly guidebook series is a well-illustrated reference book describing the anatomy, physiology, and "interdependence of the body's component parts." The first part of the book starts with cells and proceeds to explain the structure and function of bodily parts and systems. Each system is covered thoroughly enough to provide general readers with a basic introductory lesson on the composition and workings of the human body. The second section is an A to Z encyclopedia of medical terms, diseases, and conditions. The entries seem to be current up to about 2002 as there was no mention of SARS (Sudden Acute Respiratory Syndrome) or the recent findings by the National Institutes of Health on hormone replacement therapy.

Otherwise, the text is written in clear, concise language and is accompanied by colorfully detailed illustrations, scanning electron micrographs, MRI scans, and x-rays. Also contains cross-references, helpful statistics such as respiratory volumes and capacities, and a good index. This compact guide is recommended for public libraries, as a quick study guide for high school and undergraduate students, and for the layperson who needs a simple home reference to basic human biology.

3430. Physical Measurement of Bone, edited by C. M. Langton, C. F. Njeh. Philadelphia, PA, Institute of Physics Publishing, 2004. 612p., illus., bibliog., index. (Series in Medical Physics and Biomedical Engineering). ISBN 0-7503-0838-9. \$180.00. LC Call no.: QM101 2004.

Subjects: Bone and Bones; Biomechanics; Densitometry; Osteoporosis—Ultra Sonography; Bones—Measurement; Medical Physics.

22 contributors.

Reviewer: Eileen Heaser, Reference Librarian, California State University at Sacramento Library, eheser@csus.edu

Table of Contents:

Section 1. Introduction

1. Anatomy, Physiology and Disease 3
2. Biological Safety Considerations 35
3. Radiation Safety Considerations 72
4. Instrument Evaluation 91

Section 2. Invasive Techniques

5. Mechanical Testing 125
6. Histomorphometry 185
7. Microscopy and Related Techniques 225

Section 3. Ionizing Radiation Techniques

8. Absorptiometric Measurement 267
9. Quantitative Computed Tomography 308
10. Peripheral Quantitative Computed Tomography and Micro-Computed Tomography 319
11. Radiogrammetry 337
12. In Vivo Neutron Activation Analysis and Photon Scattering 355

Section 4. Non-Ionizing Techniques

13. Magnetic Resonance Imaging 379
14. Quantitative Ultrasound 412
15. Finite Element Modelling 475
16. Vibration Analysis 511
17. Human Studies 551
18. Animal Studies 571

Index 601

The Physical Measurement of Bone is another title in the **Series in Medical Physics and Biomedical Engineering** the official book series of the International Federation for Medical and Biological Engineering (IFMBE). The IFMBE was established in 1959 as a means of providing international collaboration in research and practice of the profession. To date there are 48 national members.

This is a scholarly, thorough, detailed, monograph on bone measurement. The editors are lead or collaborating authors on numerous articles on bone indexed in **Index Medicus**. Twenty-two contributors from Europe and North American contributed to the volume.

The book is comprised of five sections. Section one provides a description of the anatomy and physiology of bone. Risk and safety issues are discussed e.g. hazard identification, mechanical hazards, disinfectants, equipment and instruments, risk assessment, etc. The second section deals with mechanical testing or invasive techniques e.g. measuring the properties of bone and factors influencing these properties. Ionizing radiation based techniques e.g. X-rays, pQCTs, BMD and CT images are detailed in section three. Non-ionizing techniques e.g. QMR, ultrasound and in vitro and in vivo experiments are discussed in section four. The last and fifth section (however not designated as such in the table of contents) reviews animal and human studies with an emphasis on osteoporosis management.

Contains black and white illustrations, graphs, charts, magnetic resonance imaging and other x-ray images. Extensive reference lists follow each chapter.

Recommended for researchers and graduate students in the disciplines of medical physics, biomedical engineering, radiology, radiotherapy and clinical research. Recommended for academic libraries with curriculum in the disciplines noted above.

Archaeology

3431. Treasure Lost at Sea: Diving to the World's Great Shipwrecks, by Robert F. Marx, Jenifer G. Marx. Buffalo, NY, Firefly Books, 2003. 194p., color illus., bibliog., index. ISBN 1-55297-872-9. \$24.95. LC Call no.: G525.M379 2003.

Subjects: Shipwrecks; Underwater Archaeology

Reviewer: Kay Plesca, Consultant, Kayp621@aol.com

Table of Contents:

1. The Classical World 21
2. Scandinavian Shipwrecks 37
3. The Age of Discovery 51
4. The Spanish Galleons 65
5. The Invincible Armada of 1588 87
6. The Manila Galleons 95
7. Bermuda, Graveyard of Ships 105
8. The East Indiamen 117
9. Privateers, Pirates and Mutineers 133
10. Shipwrecks -in-Waiting 145
11. Deep-Water Shipwrecks 159
12. Port Royal: The Sunken City 175

Appendix: Methods Used in Underwater Archaeology 187

Selected Bibliography 189

Index 190

Treasure Lost at Sea: Diving to the World's Great Shipwrecks is a beautiful soft cover text full of stunning photographs, drawings and paintings. One cannot help but be drawn to the stories of the ships; the incredibly well preserved artifacts and the remarkable underwater photography that lets one glimpse what few are able to see first hand

Readers will appreciate the historical detail of time, circumstance and place that take one from Roman galleys and Phoenician merchant ships to the Titanic and a World War II Japanese submarine. Also

included are archeological sites, which have been covered by water over time where discoveries continue today. Whether the treasure is coins, jewelry, pottery or ship's armament, each is unique and amazing.

The book includes an excellent index, a bibliography and an interesting appendix defining the terms and equipment used in underwater archaeology. There is an amazing amount of information on shipwrecks around the world, from the North Sea to the South Pacific. Overall, the text is informative, interesting and visually stimulating.

Treasure Lost at Sea: Diving to the World's Great Shipwrecks is recommended for public libraries. Middle and secondary school libraries will also find this a welcome addition to their collections. Whether one is interested in history, treasure, diving or the perils of the sea, there is something for everyone.

Astronomy

3432. Firefly Moon Observer's Guide, by Peter Grego. Buffalo, NY, Firefly Books, 2004. 192p., color illus., bibliog., index. ISBN 1-55297-888-5. \$14.95. LC Call no.: QB581.G74 2004.

Subjects: Moon—Observers' Manuals.

Reviewer: Judy Matthews, Physics-Astronomy Librarian, Michigan State University Science Library, matthews@pa.msu.edu

Table of Contents:

1. Lunar Geology and the Moon's Features 8
2. The Moon in Space 34
3. The Lunar Observer's Equipment 44
4. Moonwatching 62
5. Recording Your Observations 138
6. Eclipses and Occultations 152
7. The Space-Age Moon 162

Glossary 178

Resources 182

General Index 187

Features Index 188

While Mars may be stealing the headlines lately, the moon remains, as ever, an object of intense fascination. The British author's personal passion for study of the moon is quite apparent in this practical observer's guide. An amateur astronomer and astronomy writer himself, he shares here his substantial knowledge of the moon in this highly detailed but very readable text. The first chapter provides a thorough grounding in lunar geology - the moon's geological history and evolution. The second chapter provides the reader with an orientation of the moon in space, describing its satellite relationship to the earth. The rest of the guide is devoted to the observation of the moon, beginning with an explanation of equipment choices and features, from binoculars to "serious" telescopes. The longest and most important chapter, on "Moonwatching", outlines and illustrates the features that may be observed on a daily basis through a full lunation of 29 days, and is followed by a companion chapter describing a variety of options for recording lunar observations. A short discussion of eclipses and occultations and a final chapter on lunar space missions round out the guide.

This compact text is generously and beautifully illustrated, including detailed maps of the lunar surface and color photographs. A glossary of lunar terms, a short list of resources (including Web resources and a selected bibliography of books, journals, and software), and a general index follow the seven chapters. The guide concludes with a lunar features index that leads the reader to many illustrations and maps.

This not a light read or an appropriate choice for the reader who seeks only basic knowledge about the moon. Rather, it is clearly aimed at the dedicated amateur astronomer with an interest in intimate knowledge of the moon. This would be a good choice for public libraries with significant science collections, and college and university science libraries.

3433. Firefly Practical Astronomy, by Storm Dunlop. Buffalo, NY, Firefly Books, 2004. 208p., color illus., bibliog., index. ISBN 1-55397-825-7. \$14.95. LC Call no.: QB44.3.D92 2004.

Subjects: Astronomy.

Reviewer: John Dupuis, Science Librarian, York University Steacie Science Library, jdupuis@yorku.ca

Table of Contents:

1.	Beginning Astronomy	4
2.	Learning Your Way	19
3.	Astronomical Equipment	49
4.	Star Charts	71
5.	Recording Observations	85
6.	Near-Earth Objects	99
7.	The Moon	116
8.	The Sun	133
9.	Observing the Planets	141
10.	Observing the Outer Planets	157
11.	The Stars	170
12.	Deep-Sky Objects	189
	Resources	199
	Glossary	203
	Index	205

Astronomy is a bit unlike most academic disciplines in that amateurs can and do make important contributions to the advancement of knowledge. Amateurs, for example, play a significant role in watching for comets and supernovae. So, the question is, how do you become a talented amateur? Beginner books can certainly play an important role in sparking interest and getting a lot of basic knowledge in place.

And this is certainly as good an introductory book as you would want. Definitely written at an adult level, this book conveys a lot of basic information in a very small number of pages. It covers information on how to observe, what equipment to acquire and what types of observing best suites different telescopes or binoculars. I particularly appreciated the section on what can be observed with the naked eye. After covering the basics, it quickly gets to the meat of the book: how to observe the various types of objects. Each section is quite detailed in its coverage. The Near Earth chapter, for example, covers how to observe and photograph aurorae, noctilucent light, meteors and artificial satellites. The later sections all include extremely valuable tables on when a particular phenomenon can be observed. For example, there is a partial solar eclipse on March 19, 2007, that can be observed in East Asia. Finally, at the end there is a good list of books, magazines and organizations that can take the amateur astronomer to the next level.

Another strength is its relative compactness. This is a book that will fit into your back pocket, making it perfect for taking on any expedition or leaving at the cottage for those lazy summer nights. This, of course, is related to the only criticism that I have. The book can be rather dense and almost confusing at times as complex concepts are explained rather quickly before launching into the next topic. The glossary and index help a lot, but this book sacrifices a bit of clarity to keep the page count down.

Very much appreciated is the books emphasis on the importance of the amateur astronomer. The author constantly makes reference to the importance of making accurate observations and recording what you see. There are several photos and drawings of made by amateurs to give a feel for what is possible.

This is a book I would recommend for any public library collection, especially one that does not already have a lot of books on popular astronomy. The same would be true for any middle school or high school library. Although challenging, this is a perfect book for the budding astronomer or any precocious student. On the other hand, academic collections, which already have an extensive collection of books on the topic, for example from the **Practical Astronomy** series, may not find this book appropriate.

Biology

3434. Biodiversity, by Christian L  veque, Jean-Claude Mounolou. Hoboken, NJ, John Wiley, 2003. 284p., bibliog., index. ISBN 0-470-84956-8, 0-470-84957-6pbk. \$120.00, \$45.00pbk. LC Call no.: QH541.15.B56L48413 2003.

Subjects: Biological Diversity.

Reviewer: Karen Swanson, Librarian Contractor with ASRC Information Services for U. S. Environmental Protection Agency Region 5 Library, swanson.Karen@epa.gov

Table of Contents:

1. Brief History of a Concept 5
2. Biological Diversity 13
3. The Mechanisms at Work in the Diversification of Life 39
4. The Species Richness of Natural Communities as a Result of Equilibrium/Non-Equilibrium Processes 73
5. Biological Diversity and the Functioning of Ecological Systems 97
6. The Dynamics of Biological Diversity and the Consequences of Human Activities 131
7. The Dynamics of Biological Diversity and Implications for Human Health 165
8. Genetic Resources and Biotechnology 185
9. Useful Nature 207
10. The Conservation of Biodiversity 225

On the Web 269

References 275

Index 281

Biodiversity is written by Christian L  veque from the Centre Nationale de la Recherche Scientifique and by Jean-Claude Mounolou from the Universit   d'Orsay. Originally written in French, it was translated by Vivien Reuter.

The book's introduction gives the reader an overview of the history of biodiversity. From how the 1960s saw the birth of ecology to how it evolved from a species-specific study to studying biodiversity in context of ecosystems.

The authors believe "it is urgently necessary to take action to preserve biological diversity, if we do not want to be the agents and witnesses of new mass extinctions." They claim "the aim of this book is to illuminate some perspective on this issue by giving the reader an overview of current knowledge about the diversity of the living world and the various problems entailed in its conservation and sustainable use."

Biodiversity covers the history of biodiversity, biological diversity, mechanisms of biological diversity, species richness of natural communities, biological diversity and the functioning of ecological systems, dynamics of biological diversity and the consequences of human activities and implications for human health, genetic resources and biotechnology, the value and use of biological diversity, and conservation of biodiversity. It includes web sites of interest, references, suggested reading and a brief index. Chapters and chapter sections are numbered for ease of use. This book is recommended for biology and environmental science libraries, and is appropriate for undergraduate and graduate students, and environmental scientists.

3435. Life Sciences for the 21st Century, edited by E. Keinan, I. Schechter, M. Sela. Hoboken, NJ, Wiley-VCH, 2004. 355p., illus. (part in color), bibliog., index. ISBN 3-527-30588-2. \$45.00. LC Call no.: QH307.2.L544 2004.

Subjects: Life Sciences; Life Sciences—Forecasting.

24 contributors.

Reviewer: Janet Hughes, Biological Sciences Librarian, Pennsylvania State University Library, jah@psulias.psu.edu

Table of Contents:

1. Ribosomes, The Machines of Life 1
2. Rnase P 49
3. The Antiquity of RNA-Based Evolution 61
4. Aminoacyl tRNA Synthetases as Potential Markers for the Development of the Genetic Code 81
5. The Ubiquitin-Mediated Proteolytic System 93
6. How Proteins Speak with One Another in Cell Signaling 151
7. From Tyrphostins to Gleevec 175
8. Protein Phosphorylation 191
9. The Concept of Specificity in Peptide Vaccines for Infectious, Autoimmune and Neoplastic Diseases 225
10. The Prospect of Cell Replacement Therapy by Nuclear Transplantation 259
11. The Control of Hematopoiesis and Leukemia 269
12. No Future for Agriculture without Plant Biotechnology 287
13. The Phantom Vector of an Emerging Viroid 297
14. From Rapeseed to Canola 305
15. Future of Maize Improvement 311
16. Population Dynamics in Evolutionary Ecology 327

Index 345

This book is intended to give an overview of some trends and prospects in the life sciences. It is not intended to be comprehensive, nor is it an introductory text. Instead, it tries to give the "taste and flavor of the life sciences". While this goal sounds reasonable, sampling the life sciences in this manner results in a disjointed and uneven survey of the life sciences.

The preface begins with a discussion of how scholarship has, in the past, partitioned science into distinct and traditional disciplines such as mathematics, physics, chemistry, biology, and medicine, with subcategories in each discipline. In the present scholarly climate, however, the editors suggest that universities now encourage integration of science, collaboration, and interdisciplinary research. Thus, this book is the second of a series to compile scientific contributions covering a wide range of active disciplines. The first volume was dedicated to the chemical sciences (**Chemistry for the 21st Century**, 2001, ISBN 3-527-30235-2) and was mostly a collection of papers from a 1998 celebration marking the 50th anniversary of the State of Israel.

There is no indication in the preface of the intended audience for this book. However, the editors state the goal of trying to expose readers to new ideas or to "subjects well beyond their own scientific disciplines". From this statement, one assumes the editors believe the readers are already scientists. No further elaboration of the expected education level or background of the potential audience is given in the preface, although the back cover insists this volume will provide "fascinating reading for everyone with an active interest in the life sciences". This implies a broad audience, yet many chapters do not give sufficient background for non-scientists to begin to comprehend the concepts presented. There are no glossaries or other explanatory materials provided, although an extensive index completes the book. Consequently, this book is not suitable for most undergraduates or laypersons.

Unlike the chemistry volume, where most of the papers came from a conference, the topics in this volume were, in theory, chosen to be "as diverse and colorful as life itself" according to the back cover of the volume. The back cover asks potential readers to ponder, "which ones are the currently most dynamic areas in the Life Sciences", and "where do future challenges lie, as we enter the new millennium". It promises the reader can "discover how top-of-the-league scientists view the current state of their discipline and where they expect the next important breakthroughs to occur". This sounds wonderful, but instead of the "broad-scope snapshot" described in the preface, the chapters show a slant towards biochemistry, with chapters on ribosomes, RNA, proteolysis, the role of proteins in cell signaling, peptide vaccines, protein phosphorylation and so forth. There are a few chapters with an agricultural emphasis, and some of the biochemistry oriented chapters cover topics related to health, such as vaccines, cell replacement therapy, the relationship of antibiotics and ribosomes, and cancer. Only one chapter attempts to discuss evolutionary ecology and there is nothing on biodiversity, global environmental sciences, bioinformatics, stem cell research, temperate rainforests, endangered wildlife and over-fished fisheries and many, many other topics that are dynamic and currently "hot" in the life sciences. Thus, this book does not give a "broad-scope snapshot" or even a

“taste” of the life sciences; instead, it gives the reader an uneven sampling of a narrow slice of the life sciences.

This volume was written by 25 scientists who are leaders in their fields, and recipients of Nobel, Wolf or Lasker prizes. Unfortunately, some of these experts seem to be writing for other such experts, not for “everyone with an active interest in the life sciences”. The language is often full of jargon and assumes a large amount of prior knowledge of scientific terminology, methods and equipment. Some authors write clearly, in a manner that readers with basic science background could understand, but these authors are outnumbered by those that write at a level meant for other professional scientists.

The title of the volume, and the description on the back cover, imply that the essays will be insightful discussions of the current research and future possibilities. However, the chapters are very disparate in how visionary and insightful they seem. Some chapters seem to be summaries of past discoveries, with no clear indication of how this knowledge will be important in the future. Some chapters give hints at what the future may hold, but discerning such hints requires extensive knowledge of the underlying science. Only a few chapters are explicit in discussing the impact these areas of research might have in the future. The aptly titled “No future for agriculture without plant biotechnology” is well-written and forward-thinking, clearly explaining the current situation and the need for future developments. The chapters on cell signaling and on phosphorylation are written in a coherent manner, discussing the significance of the topics, a little of the background, current knowledge and then discussing future implications and research. These chapters fulfill the promise of this volume’s title. Many, however, do not. The editors allowed the individual authors to be as expansive or minimalist as they chose. Consequently, many of the chapters leave the reader with little understanding of how this information fits into the promised exploration of a unique vision of **Life Sciences for the 21st Century**.

Perhaps the editors’ goal may have been better realized if they had given some overall discussion or summary of the ideas and information presented. The lack of overarching insight makes the volume seem to lack cohesion. While the reader can see how some individual chapters fit under the scope of the title, there is no linking between chapters to clarify the relationships between the different topics. Since the preface lamented the earlier segmentation of sciences into categories, and celebrated the new integrated, interdisciplinary attitude towards science, the fact the editors did not try to pull all the chapters together is puzzling.

Overall, this book provides interesting essays on some very narrow areas of research in the Life Sciences. It does not provide the “broad-scope snapshot” of the life sciences promised in the preface, nor is it suitable for most non-scientists and certainly not for “everyone with an active interest in the life sciences”. However, for research scientists interested in perspectives on some mostly biochemical areas of research in the life sciences, this book could be useful. Recommended for extensive research collections.

Botany—Seagrasses

3436. World Atlas of Seagrasses, by Edmund P. Green, Frederick T. Short. Berkeley, CA, University of California Press, 2003. 298p., color illus., bibliog., index. ISBN 0-520-24047-2. \$60.00. LC Call no.: QK495.A14W67 2003.

Subjects: Seagrasses—Atlases.

Reviewer: Paula J. Wolfe, Associate Librarian, Science and Engineering Team, University of Arizona, wolfep@u.library.arizona.edu

Table of Contents:

Global Overview 5

1. The Seagrasses of Scandinavia and the Baltic Sea 27
2. The seagrasses of Western Europe 38
3. The Seagrasses of the Western Mediterranean 48
4. The Seagrasses of the Black, Azov, Caspian and Aral Seas 59
5. The Seagrasses of the Eastern Mediterranean and the Red Sea 65
6. The Seagrasses of the Arabian Gulf and Arabian Region 74
7. The Seagrasses of Kenya and Tanzania 82

8. The Seagrasses of Mozambique and Southeastern Africa 93
 9. The Seagrasses of India 101
 10. The Seagrasses of Western Australia 109
 11. The Seagrasses of Eastern Australia 119
 12. The Seagrasses of New Zealand 134
 13. The Seagrasses of Thailand 144
 14. The Seagrasses of Malaysia 152
 15. The Seagrasses of The Western Pacific Islands 161
 16. The Seagrasses of Indonesia 171
 17. The Seagrasses of Japan 185
 18. The seagrasses of the Republic of Korea 193
 19. The Seagrasses of the Pacific Coast of North America 199
 20. The Seagrasses of The Western North Atlantic 207
 21. The Seagrasses of The Mid-Atlantic Coast of the United States 216
 22. The Seagrasses of The Gulf of Mexico 224
 23. The Seagrasses of the Caribbean 234
 24. The Seagrasses of South America: Brazil, Argentina and Chile 243
- Appendices:
1. Seagrass Species, by Country of Territory 251
 2. Marine Protected Areas Known to Include Seagrass Beds, by Country or Territory 256
 3. Species Range Maps 262
- The Global Seagrass Workshop 287
- Index 288

Seagrasses make up only <0.02% for the angiosperm flora. There are two families and 12 genera with no accepted number of species. Species number varies depending upon viewed molecularly or morphologically. Fifty or sixty species are accepted.

Research on seagrasses has focused on evolution, distribution, habitat requirements, and speciation. Global impact on marine ecosystems is just coming to the forefront. The World Atlas of Seagrasses provides a global view of distribution and shows a glimpse of the type of research that has been done.

Each of the 24 chapters covers an area of the world with maps and case studies. There are short writings on biomass, productivity, ecology, threats, associated biota, and historical perspectives. Chapters do not include the same subject headings, which depend upon the information gleaned from present research. There are tables that may show average biomass, density, growth rates, or percent coverage. The case studies are short but show the type of research done in the local areas. Each chapter has a cited reference list.

There are three useful appendices. One: a list of species by country or territory. Two: a list of marine protected areas known to include seagrass beds and three, species range maps. The map section also has small drawings of the specific seagrass. Despite the lack of morphological diversity it is useful for those who are unfamiliar with seagrasses to see the similarities of species.

The Atlas is designed very well. Information is easy to find. It is an excellent and appropriate addition for any college library. Can be used in general or advanced ecology, conservation, or botany courses. It complements other volumes, such as Stephen A. Bortone's **Seagrasses: Monitoring, Ecology, Physiology, and Management** (CRC Press, 2000) and Marten A. Hemminga's **Seagrass Ecology** (Cambridge University Press, 2000). For a view of US Conservation see Guidelines for the **Conservation and Restoration of Seagrasses in the United States and Adjacent Water**: <http://purl.access.gpo.gov/GPO/LPS2922> on the Internet.

Computer Science

3437. Beowulf Cluster Computing with Linux, 2nd edition edited by William Gropp, Ewing Lusk, Thomas Sterling. Cambridge, MA, MIT Press, 2003. 618p., illus., bibliog., index. (Scientific and Engineering Computation). ISBN 0-262-69292-9. \$40.00. LC Call no.: QA76.58.B46 2003.

Subjects: Parallel Computers; Beowulf Clusters (Computer Systems); Linux.

Reviewer: Tom Volkening, Engineering Librarian, Michigan State University Engineering Library, volkenin@mail.lib.msu.edu

Table of Contents:

1. So You Want to Use a Cluster 1
2. Node Hardware 21
3. Linux 41
4. System Area Networks 77
5. Configuring and Tuning Cluster Networks 93
6. Setting Up Clusters 143
7. An Introduction to Writing Parallel Programs for Clusters 171
8. Parallel Programming with MPI 207
9. Advanced Topics in MPI Programming 245
10. Parallel Virtual Machine 279
11. Fault-Tolerant and Adaptive Programs with PVM 315
12. Numerical and Scientific Software for Clusters 335
13. Cluster Management 357
14. Cluster Workload Management 373
15. Condor 379
16. Maui Scheduler 427
17. PBS 447
18. Scyld Beowulf 471
19. Parallel I/O and the Parallel Virtual File System 493
20. A Tale of Two Clusters 535
21. Conclusions 579

Appendices:

- A. Glossary of Terms 583
- B. Annotated Reading List 587
- C. Annotated URLs 591

References 595

Index 607

Supercomputers are the holy grail of high speed computing. Scientists and engineers need them to solve their big complex computing problems. Unfortunately the early supercomputers were expensive. The early models were often one-of-a-kind creations or built in very small numbers. Each vendor used a different operating systems and the software tools for writing applications usually had to be created for each line of supercomputer. Supercomputers were expensive to build and maintain but researchers needed them to solve complex problems like weather prediction, real time computer graphics, and analysis of aerial photographs. At the same time general-purpose computers were becoming more powerful and less expensive making the purchase of supercomputers more difficult to justify. This led to hard times for the supercomputer industry. However, two NASA workers developed an idea for providing high speed computing with a more affordable price tag. They hypothesized that by using off-the-shelf personal computers connected by a high-speed network that they could create a system for parallel computing with performance comparable to a supercomputer. These systems came to be known as Beowulf clusters.

This multi-authored book is neither a how to manual or an abstract discussion of cluster computing. The book is divided into three major parts; enabling technologies, parallel programming, and managing clusters. The first chapter describes the types of applications best suited for cluster computing. Subsequent chapters provide a general discussion of how to select hardware, how to create and configure the network connecting each unit, how to select and install software, how to write parallel programs and how to manage the system. These discussions of the concepts supporting cluster computing are supplemented by examples drawn from current systems. The book ends with an annotated reading list of print sources, a selected annotated list of URLs and a reference list.

This is a rapidly changing area in computer science. The first edition of this title came out in 2002 so parts of this new edition may become dated in a relatively short period of time. That being said this does provide a good introduction to Beowulf cluster computing and is recommended for libraries supporting graduate programs and research in computer science.

3438. Software Engineering Handbook, by Jessica Keyes. Boca Raton, FL, Auerbach/CRC Press, 2003. 874p., illus., bibliog., index. ISBN 0-8493-1479-8. \$129.95. LC Call no.: QA76.758.K48 2003.

Subjects: Software Engineering—Handbooks, Manuals, etc.

Reviewer: Elaine Fetyko Page, Head of Technical Services, Elmhurst College A. C. Buehler Library, elainep@elmhurst.edu

Table of Contents:

1. Introduction to Software Engineering 5
2. The Feasibility Study and Cost/Benefit Analysis 35
3. Writing the Project Plan 47
4. Requirements Elicitation 61
5. Designing User-Oriented Systems 75
6. The Outsourcing Decision 85
7. Methodology Selection 97
8. Selecting and Integrating a Repository for Effective Resource Management 109
9. Structured Methodology Review 129
10. Extreme Programming Concepts 139
11. Development Before the Fact Technology 147
12. The Design Specification 169
13. Object-Oriented Design 181
14. User Interface Design 199
15. Software Re-Engineering 211
16. Software Testing 221
17. The Process of EDP Auditing 231
18. The Management of Software Maintenance 245
19. The Science of Documentation 255
20. Survey on IT Productivity and Quality 271
21. Putnam's Software Equation and SLIM 287
22. The COCOMO II Model 291
23. Putnam's Cost Estimation Model 297
24. Malcolm Baldrige Quality Award 299
25. Zachman's Framework 303
26. Linkman's Method for Controlling Programs Through Measurement 305
27. Kellner's Nontechnological Issues in Software Engineering 309
28. Martin and Carey's Survey of Success in Converting Prototypes to Operational systems 313
29. Putnam's Trends in Measurement, Estimation, and Control 317
30. Sprague's Technique for Software Configuration Management in a Measurement-Based Software Engineering Program 319
31. Corbin's Methodology for Establishing a Software Development environment 325
32. Couger's Bottom-Up Approach to Creativity Improvement in IS Development 329
33. Shetty's Seven Principles of Quality Leaders 333
34. Simmons' Statistics Concerning Communications' Effect on Group Productivity 337
35. Gould's Points on Usability 341
36. Prescott's Guidelines for Using Structured Methodology 345
37. Kemayel's Controllable Factors in Programmer Productivity 349
38. AT&T's "Estimateing" Process for Developing Estimates 355
39. Burns' Framework for Building Dependable Systems 361
40. Avison's Multiview Meta-Methodology 365
41. Byrne's Reverse Engineering Technique 369
42. Prieto-Diaz' Reusability Model 373
43. Farbey's Considerations on Software Quality Metrics during the Requirements Phase 377
44. Redmill's Quality Considerations in the Management of Software-Based Development Projects 381
45. Contel's Software Metrics in the Process Maturity Framework 385
46. Kydd's Technique to Induce Productivity through Shared Information Technology 389
47. Bellcore's Software Quality Metrics 391
48. Keyes' Value of Information 393

49. Pfleeger's Method for CASE Tool Selection Based on Process Maturity 395
 50. McCabe's Complexity Metric 399
 51. Halstead's Effort Measure 401
 52. DEC's Overview of Software Metrics 403
 53. Hewlett Packard's TQC (Total Quality Control) Guidelines for Software Engineering Productivity 407
 54. Motorola's Six Sigman Defect Reduction Effort 4112
 55. Lederer's Management Guidelines for Better Cost 413
 56. Kanter's Methodology for Justifying Investment in Information Technology 417
 57. The "Make-Buy" Decision 421
 58. Software Selection from Multiple Packages 423
 59. The Boehm COCOMO Model 425
 60. IEEE Standard Dictionary of Measures to Produce Reliable Software 427
 61. IEEE Framework for Measures 435
 62. Gillies' Method for Humanization of the Software Factory 439
 63. Pfleeger's Approach to Software Metrics Tool Evaluation 443
 64. Maiden's Method for Reuse of Analogous Specifications through Human Involvement in Reuse Process 447
 65. Tate's Approaches to Measuring Size of application Products with CASE Tools 451
- Appendices:
- A. System Service Request Form 459
 - B. Project Statement of Work 461
 - C. Feasibility Study Template 489
 - D. Sample Cost/Benefit Analysis Worksheets 499
 - E. Sample business Use Case 509
 - F. Sample Project Plan 519
 - G. Sample SRS 535
 - H. Sample Survey 577
 - I. Sample Architectural Design 579
 - J. Sample SDS 593
 - K. Sample Data Dictionary 639
 - L. Sample OO SDS 643
 - M. Sample Call Dictionary 749
 - N. Control Sheet 753
 - O. Test Plan 755
 - P. QA Handover Document 795
 - Q. Software Metrics Capability Evaluation Questionnaires 797
 - R. IT Staff Competency Survey 819
 - S. Function Point Counting Guide 825

Index 859

Published by an imprint of CRC Press, Jessica Keyes' **Software Engineering Handbook** is written to be a practical guide for any software engineer.

Section I gives the fundamental basics on software engineering. The 20 chapters in this section begin with a general introduction to software engineering, explaining the stages of the software development process. The following chapters take the engineer through the process, describing each of the stages in more detail. There are several chapters on design issues, but also chapters on outsourcing, software maintenance and documentation.

Section II is what distinguishes this handbook from other texts on software engineering. The 45 chapters in this metrics section are a collection of philosophies and techniques for software developers. Each chapter contains an abstract on the technique, step-by-step procedures, and references on where to find more detailed and/or supplemental information on the technique or philosophy. The techniques outlined in this section include not only software development topics but also general management and leadership topics. Each chapter is only a few pages long but is full of helpful questions to ask, pitfalls to avoid and processes to consider when implementing a software development plan.

Section III is the longest section of the book. There are 19 appendices containing templates, forms and guides to take a software engineer through every aspect of a development project. Some of the

templates and forms included are for feasibility studies, cost/benefit analyses, SRS and SDS, test plans, and even a survey for IT staff competencies.

The **Software Engineering Handbook** is written for software developers; unlike many other texts, it is written to be used in developers' everyday work. Care has been taken to reference outside sources consulted for the text, easily leading readers to more detailed information when needed. This book is recommended for libraries that serve IT professionals or training programs

3439. Tools and Environments for Parallel and Distributed Computing, edited by Salim Harir, Manish Parashar. Hoboken, NJ, Wiley-Interscience, 2004. 212p., illus., bibliog., index. (Wiley Series on Parallel and Distributed Computing). ISBN 0-471-33288-7. \$89.95. LC Call no.: QA76.58.H37 2004.

Subjects: Parallel Processing (Electronic Computers); Electronic Data Processing—Distributed Processing.

9 contributors.

Reviewer: Tom Volkening, Engineering Librarian, Michigan State University Engineering Library, volkenin@mail.lib.msu.edu

Table of Contents:

1. Parallel and Distributed Computing 1
2. Message-Passing Tools 11
3. Distributed Shared Memory Tools 57
4. Distribute-Object Computing Tools 79
5. Gestalt of the Grid 149
6. Software Development for Parallel and Distributed Computing 189

Index 209

Parallel computing is the concurrent execution of the same problem on multiple processing units. These processing units can be connected in a number of ways. Distributed Computing is any computing that involves multiple computers in remote locations working on a computational problem or data processing. Both are ways to harness multiple processing units to work on large computation problems. While advances in hardware, networks, and software have made it easier to create these types of computing environments, developing the software environment is still a complicated task.

This books reviews current and emerging software tools used for developing, implementing and supporting parallel and distributed computing environments and applications. The first chapter provides an introduction to parallel and distributed computing. The next four chapters cover message-passing tools, distributed shared-memory tools, distributed object computing tools, and grid computing. The final chapter discusses software development tools for parallel and distributed computing. This chapter includes a discussion of the issues involved in software development and then describes the steps involved in the process. A parallel stock option pricing model is used as an example throughout the chapter.

This is a multi-authored work so the structure of the chapters varies somewhat. Most chapters include some examples and end with a list of references. This work is intended for graduate students, researchers and faculty members who need information about creating and using high-performance parallel and distributed computing environments. This book is recommended for libraries supporting graduate level programs in computer science and programs utilizing high-performance computing in their research.

Engineering—Chemical

3440. Modern Polyesters: Chemistry and Technology of Polyesters and Copolyesters, edited by John Scheirs, Timothy E. Long. Hoboken, NJ, John Wiley & Sons, 2003. 750p., illus., bibliog., index. (Wiley Series in Polymer Science). ISBN 0-471-49856-4. \$230.00. LC Call no.: TP1180.P6M64 2003.

Subjects: Polyesters.

Reviewer: Meris Mandernach, Science Librarian, Loyola University Chicago Science Library,
mmander@wpo.it.luc.edu

Table of Contents:

Part 1. Historical Overview
1. The Historical Development of Polyesters 3

Part 2. Polymerization and Polycondensation
2. Poly(ethylene Terephthalate) Polymerization—Mechanism, Catalysis, Kinetics, Mass Transfer and Reactor Design 31
3. Synthesis and Polymerization of Cyclic Polyester Oligomers 117
4. Continuous Solid-State Polycondensation of Polyesters 143
5. Solid-State Polycondensation of Polyester Resins 195

Part 3. Types of Polyesters
6. New Poly(Ethylene Terephthalate) Copolymers 245
7. Amorphous and Crystalline Polyesters based on 1,4-Cyclohexanedimethanol 267
8. Poly(Butylene Terephthalate) 293
9. Properties and Applications of poly(Ethylene 2,6-naphthalene), Its Copolyesters and Blends 323
10. Biaxially Oriented Poly(Ethylene 2,6-naphthalene) Films 335
11. Synthesis, Properties and Applications of Poly(Trimethylene Terephthalate) 361

Part 4. Fibers and Compounds
12. Polyester Fibers 401
13. Relationship Between Polyester Quality and Processability 435
14. Additives for the Modification of Poly(ethylene Terephthalate) to Produce Engineering-Grade Polymer 495
15. Thermoplastic Polyester Composites 541

Part 5. Depolymerization and Degradation
16. Recycling Polyesters by Chemical Depolymerization 565
17. Controlled Degradation Polyesters 591
18. Photodegradation of Poly(ethylene Terephthalate) and Poly(ethylene/1,4-Cyclohexylenedimethylene Terephthalate) 609

Part 6. Liquid Crystal Polyesters
19. High-Performance Liquid Crystal Polyesters with Controlled Molecular Structure 645
20. Thermotropic Liquid Crystal Polymer Reinforced Polyesters 665

Part 7. Unsaturated Polyesters
21. Preparation, Properties and Applications of Unsaturated Polyesters 699
22. PEER Polymers 715

Index 733

As part of the **Wiley Series in Polymer Science**, this title examines historical and recent applications of a material, which is integral in several commercial arenas. Polyesters, which are widely used in the clothing, film, and music industries, compose one of the largest polymer classes used in every day activities.

Polyesters can be classified as any chemical compounds that contain several ester groups; however, in practicality the term refers to compounds where the ester groups serve as the main structural components on the polymer chains. Polyesters vary in type and function from cyclic polyester oligomers to polyester fibers to thermoplastic polyester composites.

Although this book provides historical information, the bulk of the content focuses on technical aspects related to polyesters. With a focus on structure/property relationships observed in a variety of polyester resins, a number of graphs and figures have been included in each chapter. There is also limited coverage of environmental issues associated with polyesters and the emerging trends in polyester recycling techniques.

The editors of this text have worked extensively in both industry and academia researching polyesters. Both Scheirs and Long are in touch with emerging trends in the polyester industry. Their interests span the topics of polymer recycling, formulation and processing of polyesters, polyester catalysts, and photodegradation of polyester materials.

Overall this title would be best suited for an advanced audience of plastics engineers, polymer chemists, material scientists, or those working directly with polyester resins rather than the general public. For these reasons, this title is recommended for specialized collections where polyester research is conducted. Additionally since the book explores emerging polyester materials, there is a chance that some material may date quickly; however, for those involved in research or in manufacturing or polyester processing, this book will be essential.

Engineering—Electronics

3441. High-k Gate Dielectrics, edited by Michel Houssa. Philadelphia, PA, Institute of Physics Publishing, 2004. 601p., illus., bibliog., index. (Series in Materials Science and Engineering). ISBN 0-7503-0906-7. \$120.00. LC Call no.: TK7871.99.M44 2004.

Subjects: Gate Array Circuits—Materials; Metal Oxide Semiconductors—Materials; Metal Oxide Semiconductors—Complementary—Materials; Dielectrics—Research; Dielectric Devices.

Reviewer: Christina K. Pikas, Technical Librarian, Johns Hopkins University Applied Physics Laboratory Gibson Library and Information Center, Christina.pikas@jhuapl.edu

Section 1. Introduction

1. Introduction 1
2. Deposition Techniques 15
3. Characterization 123
4. Theory 291
5. Technological Aspects 497

Appendix—Properties of High-k Materials 597

Index 599

MOSFETs are metal-oxide-semiconductor field effect transistors. They are the key ingredient in integrated circuits and are used in all modern computers. To increase the number of transistors in a small space, each individual transistor must be made smaller; however, when the silicon dioxide layers that form the gate are made very thin, the electrons and charge carriers do not act the same way: they tunnel or leak through instead of stopping. The MOSFETs also become unreliable (See Forward, pp. ix-x, and Chapter 1, pp. 3-13). This book covers why new gate dielectric materials are necessary, the theory behind and description of the new materials, and how to make the gates.

There are dissertations, conference proceedings, and many journal articles on high relative permittivity (ϵ_r or ϵ') gate dielectrics, but this seems to be one of the first books on the subject. The editor and the contributors have written many highly cited articles in the field. Each of the sections of the chapters starts with a well-written, understandable introduction and ends with an extensive list of references. Each chapter includes many images, drawings, tables, and charts to illustrate the content. A small index is provided.

The editor presents this book as a reference for researchers and engineers in the field as well as an introductory book for doctoral students. It serves these purposes well. It is recommended for chemistry, chemical physics, materials science, and electronics academic and research libraries.

Engineering—Energy

3442. Alternate Energy: Assessment and Implementation Reference Book, by James J. Windbrake. New York, NY, Fairmont Press/Marcel Dekker, 2004. 243p., illus., bibliog., index. ISBN 0-8247-4289. \$125.00. LC Call no.: TJ807.4.A48 2004.

Subjects: Renewable Energy Sources—Handbooks.

Reviewer: Kate Peterson, Science and Engineering Librarian, California State University Long Beach Library, jpeters4@csulb.edu

Table of Contents:

1. Introduction 1
2. Lighting Technology Roadmap 13

3. Commercial Buildings Technology Roadmap 35
4. Residential Building Technology Roadmap 55
5. Windows Industry Technology Roadmap 87
6. Hydrogen Energy Technology Roadmap 111
7. Biomass Technology Roadmap 137
8. Small wind Power Energy Roadmap 171
9. Solar Electric Power Technology Roadmap 190
10. Conclusion 225

Index 241

As the debate surrounding global warming continues scientists, industry officials and governments need a method to effectively communicate and strategize about alternative sustainable energy technologies. Dr. James J. Winebrake, currently an associate professor and chair of the Public Policy Department at the Rochester Institute of Technology in New York, suggests that a strategic planning technique called "roadmapping" can do just that.

Winebrake defines "technology roadmapping" as "a futures-based, strategic planning device that outlines the goals, barriers, and strategies necessary for achieving a given vision of technological advancement and market penetration." The introduction outlines the drivers, purposes, and components of roadmapping. These include identifying the stakeholders, the current status of technologies, the future visions, the barriers to market entry (technical, market, political), the methods to overcome barriers and the roadmap document itself.

The book has eight abridged roadmaps from different types of sustainable energy technologies. These include lighting technology, commercial buildings, residential buildings, windows, hydrogen power, biofuels, small wind power, and solar energy. The roadmaps were coordinated by the U.S. Department of Energy and U.S. Department of Agriculture and non-governmental organizations such as the American Wind Energy Association and the Solar Energy Industry Association. Ultimately, the roadmaps should be used by industry, government officials and academics to develop future public policy to encourage alternative energies. There are many additional benefits such as creating a dialogue, identifying current obstacles and future opportunities, and helping to channel research money more effectively.

The final chapter reviews the similarities and differences between the roadmaps and determines how effective roadmaps are in the strategic planning process. Winebrake also discusses the status and future of sustainable energy technologies. The book includes footnotes, an index, black and white illustrations, charts, graphs, and many tables, which emphasize the broad scope of the roadmaps. Some of the roadmaps have useful appendices with terms, committee members, organizations and participants in the roadmap process. The author gives brief citation information for the full version of the roadmap.

"The overarching purpose of roadmaps is to identify key goals, barriers, and strategies for advancing a technology amidst technical, political, and market constraints and uncertainty," said Winebrake.

Alternate Energy: Assessment & Implementation Reference Book is written at an accessible level for researchers, industry officials, policy makers and all stakeholders. This book is recommended for large academic, government and research libraries that deal with alternative energy issues.

Engineering—Geological

3443. Numerical Analysis and Modelling in Geomechanics, edited by John W. Bull. New York, NY, Spon Press/Taylor & Francis, 2003. 371p., illus., bibliog., index. ISBN 0-415-24328-9. \$136.00. LC Call no.: TA705 2003.

Subjects: Engineering Geology—Mathematics; Soil Mechanics—Mathematics.

19 contributors.

Reviewer: Adriana Popescu, Plasma Physics Librarian, Princeton University Library, popescua@princeton.edu

Table of Contents:

1. The Effect of Increasing the Depth of an Underground Void on the Surface Displacements of an Airfield Runway 1
2. Numerical and Experimental Study of Compressed Air Tunnelling 25
3. A General Finite Element Model for Wave-Seabed-Structure Interaction 59
4. The Stability of Unsaturated Soil Slopes Subjected to Rainfall Infiltration 101
5. Computational Modelling of Ground Waves Due to Pile Driving 129
6. Back Analysis of Geotechnical Problems 165
7. Parameter Estimation Using Extended Bayesian Method in Tunnelling 197
8. Seismic Microzoning Using Numerical Modelling 220
9. Ground Motion Modelling Using the 2-D Chebyshev Spectral Element Method 254
10. Analysis and Design of Pile Groups 278
11. Reservoir Compaction, Subsidence and Well damage 316

Index 368

The book is a heterogeneous collection of eleven papers contributed by international researchers, which describe numerical solutions used to solve various complex geotechnical problems. The editor, John W. Bull, teaches civil engineering at The University at Newcastle upon Tyne, UK. The publisher, Spon Press, is an imprint of Taylor & Francis Group.

The problems addressed cover a broad spectrum, the main ones being: application of probabilistic techniques for soil parameter estimation, seismological problems such as seismic microzoning and ground motion modeling, analysis and design of pile foundations, underground geotechnical engineering, wave-seabed interaction and stability of unsaturated slopes.

The book is clearly addressed to post graduate researchers and specialist groups working both in onshore and offshore engineering. The text is mostly valuable in addressing the specific problems mentioned earlier and in finding solutions to address the situations where geomechanical considerations are not within standard codes of practice. All papers describe numerical techniques, most are highly theoretical and very few attempt to validate the proposed procedures based on empirical data.

Each chapter provides extensive bibliographies and is heavily illustrated with very clear and sharp graphs and charts. The book is not recommended for the general undergraduate civil engineering curriculum. It is recommended for very specialized, research level collections at academic and research institutions.

Engineering—Materials

3444. Metal and Ceramic Matrix Composites, edited by Brian Cantor, Fionn Dunne, Ian Stone. Philadelphia, PA, Institute of Physics Publishing, 2004. 429p., illus., bibliog., index. (Series in Materials Science and Engineering). ISBN 0-7503-0872-9. \$125.00. LC Call no.: TA481 2004.

Subjects: Ceramic Metals; Composite Materials.

Reviewer: Jennifer Lee, Liaison Librarian for Chemistry, Mathematics, Statistics, Environmental Science/Urban Design/Planning, University of Calgary Library, Jennifer.lee@ucalgary.ca

Table of Contents:

Section 1. Industrial Perspective

1. Metal Matrix Composites for Aeroengines 3
2. Metal Matrix Composites in Motorbikes 18
3. High-Modulus Steel Composites for Automobiles 41
4. Metal Matrix Composites for Aerospace Structures 52
5. Ceramic Matrix Composites for Industrial Gas Turbines 66
6. Composite Superconductors 76

Section 2. Manufacturing and Processing

7. Fabrication and Recycling of Aluminium Metal Matrix Composites 105
8. Aluminium Metal Matrix Composites by Reactive and Semi-Solid Squeeze Casting 117
9. Deformation Processing of Particle Reinforced Metal Matrix Composites 132
10. Processing of Titanium-Silicon Carbide Fibre Composites 145

11.	Manufacture of Ceramic Fibre Metal Matrix Composites	178	
Section 3. Mechanical Behaviour			
12.	Deformation and Damage in Metal-Matrix Composites	203	
13.	Fatigue of Discontinuous Metal Matrix Composites	222	
14.	Mechanical Behaviour of Intermetallics and Intermetallic Matrix Composites	241	
15.	Fracture of Titanium Aluminide-Silicon Carbide Fibre Composites	256	
16.	Structure-Property Relationships in Ceramic Matrix Composites	281	
17.	Microstructure and Performance Limits of Ceramic Matrix Composites	299	
Section 4. New Fibres and Composites			
18.	Silicon Carbide Based and Oxide Fibre Reinforcements	325	
19.	High-Strength High-Conductivity Copper Composites	337	
20.	Porous Particle Composites	350	
21.	Active Composites	367	
22.	Ceramic Based Nanocomposites	383	
23.	Oxide Eutectic Ceramic Composites	407	
Index			419

Metal and Ceramic Matrix Composites is the text version of the 3rd Oxford-Kobe Materials Seminar, held in 2000. After the seminar, speakers prepared extended manuscripts that were to be suitable for graduate students and researchers. This seminar (and book) looks at developments in the science and technology of ceramic and metal matrix composites over the next decade. The book is one of thirteen books in **Series in Materials Science and Engineering**.

The book is divided into 4 sections:

1. The industrial perspective, which covers the industrial scene, key design drivers and materials needs. This section seems to be very practical, discussing manufacturing techniques, applications, cost and potential benefits. It features authors from the likes of Rolls-Royce (on composites for aeroengines), and Mitsubishi Heavy Industries (on composites for aerospace structures.)
2. Section 2 covers manufacturing and processing of composites, which includes a chapter on liquid state methods of aluminum metal matrix composites, one on manufacturing of aluminum and magnesium matrix composites using reactive and semi-solid squeeze casts, the downstream use of methods such as rolling and forging, a chapter on processing of titanium/silicon carbide fibre composites, which are used in the aero-engine sector and finally one on the use of modeling to understand and control deformation in the manufacture of Ti/Si carbide and other fibre-reinforced composites.
3. This section covers main deformation, damage, fatigue, interface reactions and fracture behaviour at low and elevated temperatures in metal (ductile), intermetallic (less ductile) and ceramic (brittle) matrix composites, including chapters on micromechanical models, mechanical behaviour of composites, structure-property relationships and relationships between microstructure, interface type and performance limits.
4. Section 4 covers developments in new fibres, matrices and composites, including chapters on fibre reinforcements, novel metal matrix and ceramic matrix composites, manufacture, and nanocomposites.

Line drawings and photographs are in black and white. Some photographs could have been better labelled as it is not always clear what technique was used to obtain the original (for example, scanning electron micrograph or other technique.) The book is indexed. All chapters but one have references, though they are not extensive for all chapters, and there are some chapters with quite a few self-cites. Granted, this may be due to the small community studying this topic. According to OCLC's Worldcat, 7 libraries own this title.

This book is recommended for specialized audiences in academic libraries or corporations. It would be useful to professionals, especially engineers and chemists in materials science and metallurgy, as well as students (graduate level or higher) and researchers in the previously mentioned disciplines.

3445. Physical Methods for Materials Characterisation, 2nd edition by P. E. J. Flewitt, R. K. Wild. Philadelphia, PA, Institute of Physics Publishing, 2003. 602p., illus., bibliog., index. (Series in Materials Science and Engineering). ISBN 0-7503-0808-7. \$185.00. LC Call no.: TA410.F64 2003.

Subjects: Materials Structures.

Reviewer: Tom Volkening, Engineering Librarian, Michigan State University Engineering Library, volkenin@mail.lib.msu.edu

Table of Contents:

1. Introduction 1
2. Interaction of Radiation with Materials 21
3. Vacuum Systems 53
4. Diffraction 76
5. Photo/Electromagnetic Sources 176
6. Electron Sources 274
7. Atom/Ion Sources 451
8. Application of Computers 523

Appendices:

1. List of Symbols Used in Book 574
2. Commonly Used Conversion Factors 576
3. Wavelength of Selected Radiation Sources 577
4. Physical Constants 578
5. Acronyms for Techniques 574
6. Electron Structure of Elements 583

Index 587

Over the past two decades there has been an increasing amount of research done on the relationship between the microstructure of materials and their physical and mechanical properties. Techniques for determining the structure of materials at the nanoscale level are becoming important to both academic and industrial researchers.

This is the second edition of this work. The revised chapters cover the same basic techniques described in the first edition as well as the significant new methods developed since 1994. A new chapter on the use of computers in materials characterization has been added and there is an increased emphasis on scanning probe techniques that can be used to determine microstructure of materials at the nanoscale level. The introductory chapter provides a brief introduction to the relationship between material properties and structure at the atomic and molecular levels for different types of materials. The second chapter describes the physics behind the interactions between various types of radiation and materials. Chapters three through seven describe various techniques and their applications. Techniques covered include optical and x-ray methods, electron microscopy and spectroscopy, and ion and particle microscopy and spectroscopy. The chapters provide information on the radiation source being utilized, the building and layout of the instrumentation used, analysis of the data and bibliographic references. The work includes a number of useful appendices including a list of acronyms used in the field that should be useful to newcomers to the subject.

This book is intended for advanced undergraduates and graduate students and research scientists and engineers in materials science. It should be useful as an advanced level textbook or handbook of materials characterization techniques. It is strongly recommended for academic libraries supporting graduate level materials science programs. Although techniques described are most often used by materials scientists and engineers at universities, researchers working outside of academia may also find this book useful.

Engineering—Optical

3446. Optical Engineer's Desk Reference, edited by William L. Wolfe. Washington, DC, The International Society for Optical Engineering/Optical Society of America, 2003. 738p., illus., bibliog., index. ISBN 1-55752-757-1. LC Call no.: TA1520 2003.

Subjects: Optics—Handbooks; Optical Instruments—Handbooks.

Reviewer: Anfei Li, Consultant, University of Illinois at Chicago, ali2@uic.edu

Table of Contents:

1. Probability and Statistics 1

2.	Mathematical Functions and Relations	29
3.	Electromagnetism Foundations	47
4.	Polarization	59
5.	Interference	83
6.	Diffraction	101
7.	Surface Scattering	127
8.	Gaussian Beams	161
9.	Interferometers	175
10.	Optical Coatings	189
11.	Holography	231
12.	Geometrical Optics	241
13.	Basic Lenses	257
14.	Camera Lenses	289
15.	Infrared Lenses	309
16.	Reflecting and Catadioptric Objectives	323
17.	Diffraction Optical Elements	347
18.	Aberrations	371
19.	Image Quality	423
20.	Design and Engineering of Fiber-Optic Systems	433
21.	Radiometry and Photometry	475
22.	Stray-Light Suppression	487
23.	Thermal Detectors	497
24.	Photon Detectors	505
25.	Figures of Merit	521
26.	Solid-State Cameras	531
27.	Infrared Imagers	545
28.	Infrared Sensors	567
29.	Scanners	583
30.	Visual Considerations for Visual Displays	593
31.	Electro-Optics and Magneto-Optics	651
32.	Acousto-Optics	661
33.	Miscellany	687
34.	Conversions and Standards	693
	Index	711

The Editor is a professor of optical science and Fellow of both OSA and SPIE; serving on many committees for both. His profuse research and educational experience in optical science makes this handbook comprehensive and useful for optical engineer.

The book is well organized. Chapter titles are very descriptive, allowing the reader to find what is needed by scanning the table of contents, or by consulting the index. In the early ten chapters, Dr William L. Wolfe starts from very basic mathematical functions and physical characteristics such as probability and statistics, electromagnetism foundations, polarization, and diffraction. This book is accessible to many readers varying from basic to advanced level in optical engineering as manual. The last twenty chapters in the book illustrate different practical optical elements and systems. In order to fit this work in Ophthalmology, Dr Wolfe addressed various factors, perceptual and optical, that need to be considered in designing visual displays. These factors are accommodation, aging, color, contrast, exit pupil, eye relief distance, field of view, flicker, glare, interpupillary distance, presbyopia, ocularity, resolution, simulator, and motion sickness.

As has been said, this is a comprehensive handbook for optical engineering. However, the book only provides formulas and procedures needed by the practicing optical engineer. It has no derivations and only enough description to make matters clear. The lack of details may prove frustrating for some entry level readers.

Dr. William L. Wolfe has written this manual for the optical engineer; someone who designs optical instruments or optical systems or the optical parts of larger systems. In the book, Dr William L .Wolfe only used one chapter to cover the topic on Ophthalmology, which is not enough for researchers in Ophthalmology to get enough information. Academic libraries will do better to order more complete reference sources aimed at a more concentration on Ophthalmology. However, this book is a complete reference for optical engineer.

3447. Photonics Rules of Thumb: Optics, Electro-Optics, Fiber Optics, and Lasers, 2nd edition by Ed Friedman, John Lester Miller. New York, NY, McGraw-Hill, 2004. 418p., illus., bibliog., index. ISBN 0-07-138519-3. \$59.95. LC Call no.: TA1520.M55 2004.

Subjects: Photonics.

Reviewer: Tom Volkening, Engineering Librarian, Michigan State University Engineering Library, volkenin@mail.lib.msu.edu

Table of Contents:

1. Acquisition, Tracking, and Pointing/Detection, Recognition, and Identification 1
2. Astronomy 31
3. Atmosphericics 45
4. Backgrounds 69
5. Cryogenics 85
6. Detectors 101
7. Displays 123
8. The Human Eye 137
9. Lasers 165
10. Material Properties 195
11. Miscellaneous 215
12. Ocean Optics 229
13. Optics 241
14. Radiometry 273
15. Shop Optics 297
16. Systems 313
17. Target Phenomenology 329
18. Visible and Television Sensors 349

Appendix A 373

Glossary 389

Index 409

Rules of thumb are intended to make the lives of designers and engineers easier. The authors developed the following criteria for rules of thumb to be included in their book.

"It should be easy to implement.

It should provide roughly the correct answer.

The main points should be easy to remember.

It should be simple to express.

It should highlight the important variables while diminishing the role of generally unimportant variables.

It should provide useful insight to the working of the subject matter."

Using these criteria the authors have identified 300 "rules of thumb" that apply to optics, electro-optics, fiber optics, and lasers. Some of the rules are really laws of physics while others were developed through the experience of designers and engineers. The book is not intended to be a scholarly treatment of photonics so it does not include detailed proofs of the rules. It provides a practical rather than a theoretical treatment of the subject. The rules are divided into 18 chapters by category. Each chapter begins with a short introduction to the subject followed by a discussion of the rules. References are included when available. A detailed table of contents lists all of the rules. The glossary provides definitions for the terms and acronyms used in the book that should be helpful for readers new to the field.

This book is intended for the student or professional that must deal with the practical aspects of the design and application of photonics devices. This title is recommended for purchase by special and academics libraries that serve designers and engineers in this broad field.

Engineering—Telecommunications

3448. IP-Based Next-Generation Wireless Networks: Systems, Architectures, and Protocols, by Jyh-Cheng Chen, Tao Zhang. Hoboken, NJ, Wiley-Interscience, 2004. 413p., illus., bibliog., index. ISBN 0-471-23526-1. \$74.95. LC Call no.: TK5105.78.C49 2004.

Subjects: Wireless LANs.

Reviewer: Joe Williams, Education Services Librarian, Texas A & M University Medical Sciences Library, joew@tamu.edu

Table of Contents:

1. Introduction 1
2. Wireless IP Network Architectures 33
3. IP Multimedia Subsystems and Application-Level Signaling 121
4. Mobility Management 161
5. Security 303
6. Quality of Service 367

Index 407

This book details three major, emerging wireless networking standards - each of which incorporates wireless IP technologies. These nascent standards (3GPP, 3GPP2, and MWIF) are currently guiding the development of very different wireless networking architectures. In this book, the authors describe each of these technical standards in a clear, concise manner. The content is intended for an audience with a solid understanding of traditional computer networking concepts (network layers, packet data, IP, etc.). A history of wireless networking development, and a review of wireless networking concepts, is provided.

With the help of IP technologies, today's mobile data services (camera phones, map and navigation services, etc.) are moving closer toward full integration with the Internet. However, there is currently no global standard defining wireless IP networking infrastructure. Three international groups leading the competition to create such a standard are: the Third Generation Partnership Project (3GPP), the Third Generation Partnership Project 2 (3GPP2), and the Mobile Wireless Internet Forum (MWIF). Each of these groups has developed a proposed standard, and each of their models makes use of wireless IP technologies. The authors of this work describe these standards as they relate to Network Architecture, IP Multimedia Subsystems and Application-level Signalling, Mobility Management, Security, and Quality of Service.

The content of this book is arranged in a very logical fashion. Each chapter begins by outlining all content to be covered, and provides any necessary background or review information for that chapter. Useful, black and white diagrams are also incorporated throughout the text. As might be expected, the content is heavy with acronyms. With this in mind, the authors have provided a very useful 9-page glossary of acronyms in the front of the book for quick-reference. The book also contains a fairly detailed index.

This work is appropriate for anyone with a solid understanding of traditional computer networking concepts, including IT professionals, graduate and undergraduate students. Overall, this work provides a clear view of three very technical networking standards. This book would likely serve as a fine reference companion for anyone reading through the original standards documentation.

This book is recommended for any library whose collection supports Internet or computer networking research.

3449. Wireless Data Services: Technologies, Business Models and Global Markets, by Chetan Sharma, Yasuhisa Nakamura. New York, NY, Cambridge University press, 2003. 361p., illus., bibliog., index. ISBN 0-521-82843-0. \$55.00. LC Call no.: HE7631.S53 2003.

Subjects: Telecommunications; Technological Innovations; Electronic Commerce; Wireless Communicating Systems.

Reviewer: H. Robert Malinowsky, Manager of Collections Development, University of Illinois at Chicago Library, hrm@uic.edu

Table of Contents:

1. Introduction 1
2. The Impact of Globalization 12
3. Adoption Trends and Analysis by Region 32
4. Subscriber Needs and Expectations 52
5. The Wireless Value Chain 65
6. Global Wireless Technologies: Systems and Architectures 95
7. Global Wireless Technologies: Network, Access, and Software 124
8. Business Models and Strategies 159
9. Business Issues and Challenges 193
10. Technology Issues and Challenges 226
11. Case Studies 252
12. Perspectives 262
13. Future of Wireless Technologies, Applications and services 288
14. Conclusions and Recommendations 330

References and Recommended Reading 343
Index 349

Wireless technology has been growing at a fantastic rate from “the bulky brick-sized phone with basic network features of a few years ago to the pocket sized advanced communicator and complex networks of today.” In spite of all the advancements, there seems to be no end to new an innovative applications as can be seen by the countless advertisements in the print media as well as television. Although some of these may be “flash in the pan” they still are the forerunners of standard products of the future. “In this book, the authors have with great care analyzed and articulated the business and technology aspects of wireless data. The unique global perspective of wireless market and technology presented in this work offers a comprehensive view of the challenges and future promises of one of the most dynamic fields of modern technology.”

The book looks at the impact of wireless technology on society from three critical angles—technology innovation, business models, and cultural nuances that characterized global markets. It begins with a general introduction followed by observations of the impact of globalization, subscribe needs and expectations, business strategies and needs, and the numerous issues and challenges that confront researchers in the area of wireless technology. The chapter on the future gives an insight on things to come, some of which are already available since the book was published.

Probably the one most key concept of the book is “A wireless system accelerates the mobility and mobility in turns accelerates the globalization.” The impact on the world has been unbelievable with some positive outcomes and some very dark and horrific outcomes when used by terrorists. This is an excellent book covering all of the current research and development in the wireless industry as well as pointing out what is to come. A recommended book for all academic libraries.

Environmental Science

3450. Green Empire: The St. Joe Company and the Remaking of Florida’s Panhandle, by Kathryn Ziewitz, June Wiaz. Gainesville, FL, University Press of Florida, 2004. 363p., illus., bibliog..., index. ISBN 0-8130-2697-0. \$34.95. LC Call no.: HD266.F62Z54 2004.

Subjects: St. Joe Company—History; Real Estate Development—Florida—Florida Panhandle—History; Real Estate Business—Florida—Florida Panhandle—History; Land Use—Environmental Aspects—Florida—Florida Panhandle—History; Conservation of Natural Resources—Florida—Florida Panhandle—History.

Reviewer: Kathy Piselli, Contract Librarian, U.S. Environmental Protection Agency Region 4 Library, piselli.Kathy@epamail.epa.gov

Table of Contents:

1. A Slice of Paradise 1
2. The Lay of the Land 19

3. Good Ol' Florida Sand and Mud 35
4. The Era of the St. Joe Paper Company 51
5. Pork Chop Emperor 70
6. Challenges to the Empire 83
7. A Company in Transition 100
8. The Making of a Real Estate Powerhouse 120
9. Liquidating the Storehouse of Value 136
10. From Trees to Towns and Grits to Godiva 157
11. Breaking Ground 185
12. A Company Town in flux 199
13. The Wish List 230
14. An Airport Taxis for Takeoff 258
15. St. Joe and the Growth Machine 268
16. The Two Bottom Lines: Profit and Quality of Life 299

Notes 317

Bibliography 349

Index 353

Often called the state's "Last Frontier", the "Forgotten Coast", or the "Redneck Riviera", the section of the Panhandle from Apalachicola to St Mark's has been one of Florida's least-developed coastlines, known only to vacationers from Florida and nearby states.

To a great extent, this was due to the fact that much of the area was undeveloped property owned by the former St Joe Paper Company. **Green Empire** outlines the steps the company took in the 20th century to acquire its holdings, to run its paper mill, to abandon that business, and now to embark upon a successful venture into developing its considerable landholdings as enclaves for the wealthy.

These kinds of developments are controversial with locals. For example, they do not bring in people who participate in and build up the existing community. As one commissioner is quoted "They're building their own schools so their children don't have to use our schools". The enclaves struggle with the difficulty of both keeping the riff-raff away and enticing local people to come from far away to staff the low-wage jobs they generate. The book does not whitewash over the reasons the company is controversial today, and yet it does not read as a diatribe. It accomplishes an objective style by quoting heavily from company officials and locals both. It looks at steps the company has taken to mitigate negative social and economic effects of its moneymaking efforts, dispassionately observing what has worked and what has failed.

In many ways, this is a song of the South. But it will look terribly familiar to those living in coastal areas throughout the country. Many dangerous industries have located in coastal communities either because they were near water, or because they were distant from state government inspectors. When the industry shuts down, it is good for health, but followed by the ignominy of low-wage service jobs. Certainly developers everywhere find ways to use their political muscle to get taxpayers to foot infrastructure bills, and the paternalism of the St Joe Company will sound familiar to anyone living in a single-industry town. The difference here is in the sheer scope of what is possible for this company, given the size of its holdings. The book will be utterly fascinating to people who have visited north Florida over the years and have noticed these events as they have unfolded. Recommended for all public, and university undergraduate libraries.

3451. Indoor Air Quality: A Guide for Facility Managers, 2nd edition by Ed Bas. New York, NY, Fairmont Press/Marcel Dekker, 2004. 383p., illus., bibliog., index. ISBN 0-8247-4009-2. \$92.00. LC Call no.: TH7015.B38 2004.

Subjects: Heating; Ventilation; Air Conditioning; Indoor Air Pollution; Air Quality Management.

Reviewer: Karen Swanson, Librarian Contractor with ASRC information Services for U. S. Environmental Protection Agency Region 5 Library, swanson.Karen@epa.gov

Table of Contents:

1. Introduction to Sick Buildings 1
2. IAQ Hazards to Human Health and Productivity 29
3. HVAC Basics and Indoor Air Quality 67

4. Improving Ventilation 83
5. Improving Filtration 127
6. Controlling Humidity and Moisture 151
7. The Value of Duct Cleaning 181
8. Putting It all Together 205
9. Mold 233

Appendices:

- I. Trade Association, Organizations and Publications 295
- II. IAG, HVAC and Energy Terms and Definitions 303
- III. Manufacturers, Suppliers and Service Providers 319
- IV. IAQ Forms for Practitioners and Facilities Managers 337

Index 381

Ed Bas is former editor of and contributor to an industry newsletter. His second edition reads like a compilation of many workshops for working managers on how to correct indoor air problems: clearly written and focusing on the practical aspects.

For example, in the section on Government Activity, Bas notes that the current anti-regulatory mood of the Republican majority in the Congress may mean delay or scrapping of new OSHA guidelines proposed in 1994 regarding smoking in and around public buildings. But facility managers would still be called upon to "do the right thing" in the interim, so he outlines the proposed changes. It is good advice for managers caught in the middle of partisan bickering. As it turned out, the OSHA proposals were indeed abandoned at the end of 2001. Even so, there are few public buildings today that do not restrict smoking.

Many facility managers may find the forms in the back to be useful, such as an HVAC checklist and forms to use for collecting information from building occupant complaints. Collecting information needed for diagnosis is notoriously difficult in the case of indoor air complaints. The author should identify their source.

Though it is a revision, this book would benefit from another already. Updates to information such as that about OSHA could be made. Also, the ASHRAE standard 62-2001 discussed seems to have been made final in October, 2003, probably just after the book went to print. At that time, some random typos (such as the running header to chapter 9) should be corrected by the editor. The author should add URLs to key websites and for all trade associations listed in the appendix. EPA, for example, makes its IAQ information available online before it is printed and some documents are not even released in print. Yes, even facility managers use computers now! Recommended for special libraries and some large public collections.

Forestry

3452. Forest conservation Policy: A Reference Handbook, by V. Alaric Sample, Antony S. Cheng. Santa Barbara, CA, ABC-CLIO, 2004. 322p., bibliog., index. (Contemporary World Issues). ISBN 1-57607-991-0. \$45.00. LC Call no.: SD412.S26 2004.

Subjects: Forest Conservation—United States—Handbooks; Forest Policy—United States—Handbooks.

Reviewer: Robert B. Ridinger, Chair, Electronic Information Resources Management, Northern Illinois University Founders Memorial Library, rridinger@niu.edu

Table of Contents:

1. The Conservation Movement and the Roots of U. S. Forest Policy 1
2. Current Issues in U. S. Forest Policy 23
3. Chronology 117
4. Personalities 131
5. Forest Facts and Data 143
6. Directory of U. S. Forestry Organizations 183
7. Print Resources 239
8. Nonprint Resources 265

Glossary 277

Index 293

Given the complexity of this contentious subject within American society, the appearance of this new volume of the ABC-CLIO reference series **Contemporary World Issues** is well timed. A clearly-organized text begins with a consideration of the history of the policies of forest conservation and management practiced by the government of the United States, summarizing the history of such concepts as forest reserves, clearcutting, and sustainable forest management as reflected in official action. Eight sections offer background and recent histories of the interplay of the conservation movement and the beginnings of U.S. forest policies, eleven current policy issues ranging from biological diversity and forest regulation on private lands to biotechnology and sustainable management, capsule biographies of thirty-three individuals prominent in American forestry, a chronology of important forest policy events and decisions from 1626 to 2003, a directory of forestry organizations, print and electronic resources, and a glossary. Indexing is provided by personal and institutional names and subjects. As the only parallel sources of data on this topic are the homepage of the U.S. Forest Service (<http://www.fs.fed.us/>), the **National Forestry Manual** issued by the Forest Service for internal use, and such databases as **Congressional Universe**, GPO, or the online access to Congress provided by the Library of Congress via **THOMAS** (<http://thomas.loc.gov/>), reference librarians will find this work of substantial value. Suitable for the science reference collections of libraries of all sizes from high school through university.

Genetics

3453. Genetics and the Logic of Evolution, by Kenneth M. Weiss, Anne V. Buchanan. Hoboken, NJ, Wiley-Liss, 2004. 541p., illus., bibliog., index. ISBN 0-471-23805-8. \$89.95. LC Call no.: QH390.W45 2004.

Subjects: Evolutionary Genetics.

Reviewer: Christine Taft, Head of Reference, Linda Hall Library of Science, Engineering and Technology, taftc@lindahall.org

Table of Contents:

1. Understanding Biological Complexity 1
2. Building Blocks of Life 67
3. An Internal awareness of Self 177
4. External Awareness 313
5. Finale: Evolutionary Order and Disorder between Phenotypes and Genotypes 455

References 485

Index 515

In their preface, the authors of this book explain their purpose as "to develop some general principles to help describe the patterns found in the seemingly disparate facts about the diversity of life on Earth." Sounds simple enough, but like the biological complexity that they explore, these ideas require a broad understanding of modern biology.

The introductory chapters define many concepts and terms related to evolutionary thought. Section headings are often formed as questions. "Do organisms solve problems?" "What is chance?" "What is a trait?" "Could complex traits have evolved by chance?" The authors define terms such as "inheritance", "chance" and "adaptation". In the second section they review the basic biological knowledge necessary for an understanding of the role of genetics in evolution. This includes an understanding of cell biology, genetics and molecular mechanisms. The third and fourth sections discuss the mechanisms of internal and external awareness – or biological communication.

Both authors are professors of Biological Anthropology at Penn State with research interests related to human disease. Dr. Weiss is Evan Pugh Professor of Biological Anthropology and Genetics.

Though the back cover says that the book is accessible to the layperson, it will take a determined layperson to work through this fascinating, but densely written book. The book is highly suited to students and scientists in a range of fields who want to understand how evolution works through genetics.

Geology

3454. Quantitative Remote Sensing of Land Surfaces, by Shunlin Liang. Hoboken, NJ, Wiley-Interscience, 2004. 534p., 1 CD-ROM, illus., bibliog., index. (Wiley Series in Remote Sensing). ISBN 0-471-28166-2. \$140.00. LC Call no.: QE33.2.R4L53 2004.

Subjects: Earth Sciences—Remote Sensing; Environmental Sciences—Remote Sensing; Remote Sensing.

Reviewer: Paula J. Wolfe, Associate Librarian, Science and Engineering Team, University of Arizona, wolfep@library.arizona.edu

Table of Contents:

1. Introduction 1
2. Atmospheric Shortwave Radiative Transfer Modeling 25
3. Canopy Reflectance Modeling 76
4. Soil and Snow Reflectance Modeling 143
5. Satellite Sensor Radiometric Calibration 178
6. Atmospheric Correction of Optical Imagery 196
7. Topographic Correction Methods 231
8. Estimation of Land Surface Biophysical Variables 246
9. Estimation of Surface Radiation Budget: Broadband Albedo 310
10. Estimation of Surface Radiation Budget: Longwave 345
11. Four-Dimensional Data Assimilation 398
12. Validation and Spatial Scaling 431
13. Applications 472

Appendix: CD-ROM Content 525

Index 528

This volume is a very useful and practical addition to the literature on remote sensing. Dr. Shunlin Liang is a highly cited author of more than 55 papers and book chapters on the subject. He works closely with NASA on many research projects as a professor at the University of Maryland and is the Associate Editor for IEEE Transactions on Geoscience and Remote Sensing and the coeditor of Geographic Information Science. A new level of satellite technology from the NASA Earth Observing System (EOS) program has resulted in high measurement precision. In addition, interest and use of remote sensing models have increased with university courses, graduate, faculty, and researchers using the data for modeling the atmosphere, canopy, soil, and snow. Algorithms are required for estimating land surface variables quantitatively. This book emphasizes radiative transfer modeling of the atmosphere, canopy, soil, and snow with the appropriate quantitative algorithms for calibrations. Readers must have a good background in algebra, calculus, and statistics. Each chapter has an expanded section of citations in addition to Websites that are mentioned throughout the book for further reading. There is an eight-page Acronym dictionary for remote sensing that helps with the book but also with readings and Website information.

A CD-ROM is included with data sets and program codes. For example, GeoSAIL a geometric model to stimulate canopy spectral reflectance and absorption of photosynthetically active radiation for discontinuous canopies is included. The software is written in FORTRAN and sample input and output data are provided in ASCII text files.

This book is appropriate for any college library. Advanced undergraduates, graduate students, and research faculty will find it a useful addition to the remote sensing literature.

Gynecology

3455. Reproductive Issues in America: A Reference Handbook, by Janna C. Merrick, Robert H. Blank. Santa Barbara, CA, ABC-CLIO, 2003. 240p., bibliog., index. (Contemporary World Issues). ISBN 1-57607-816-7. LC Call no.: RG133.5.M47 2003. NLM Call no.: WQ 39 M568r 2003.

Subjects: Human Reproductive Technology—United States—Handbooks; Reproductive Techniques—United States—Handbooks; Reproductive Techniques—United States—Resource Guides; Abortion, Legal—United States—Handbooks; Abortion, Legal—United States—Resource Guides; Family

Planning—United States—Handbooks; Family Planning—United States—Resource Guides; Family Planning Policy—United States—Handbooks; Family Planning Policy—United States—Resource Guides; Genetic Counseling—United States—Handbooks; Genetic Counseling—United States Resource Guides.

Reviewer: Beth Thomsett-Scott, Science Librarian, University of North Texas Science and Technology Library, bscott@library.unt.edu

Table of Contents:

1.	Reproductive Rights	1
2.	Issues in Conception and Pregnancy	37
3.	Chronology	89
4.	Biographical Sketches	113
5.	Facts and Statistics	137
6.	Organizations and Governmental Agencies	169
7.	Print and Nonprint Resources	191
	Glossary	219
	Index	227

Reproductive Issues in America is another volume in ABC-CLIO's **Contemporary World Issues series**. The series address vital issues that are occurring in today's society, including homelessness, world population, environmental activism, and this current work on reproductive issues. The authors have successfully designed this item as a starting point for readers interested in the topic. College students, researchers, legislators, general readers and others will find it useful.

The first chapter provides an informative, highly-readable and unbiased review and discussion of reproductive rights. The authors consider all sides of the issues and present references and excerpts from legal cases and other primary sources to support the content. Chapter Two provides a similarly comprehensive and unbiased account of the issues surrounding reproductive technologies, including in vitro fertilization, surrogacy, and prenatal diagnosis. The historical chronology provided in Chapter Three is appropriately detailed and provides relevant references and further reading. The fourth chapter offers biographical sketches, which are fairly, short, but informative, and clearly list the sources from which they were taken. Chapter five contains facts, statistics and other primary materials, such as excerpts from court cases or speeches, relating to the content. While perhaps surprisingly short, this chapter effectively covers the main issues in reproduction and successfully provides a starting point for further research. There is an informative list of organizations and Government agencies provided in the sixth chapter. It is not exhaustive and doesn't try to be and, like the book itself, provides an introduction rather than a complete overview. A table of contents for this chapter would have been a useful addition, and perhaps sorted by subject or topic. Chapter Seven provides an annotated list of resources that includes books, online journals and newsletters, videos (which is by far the longest section) and web sites.

The table of contents is highly detailed to allow the reader to quickly locate the relevant information. Chapter titles are listed on the left hand side of each page while the titles of sections within the chapters are on the right hand side in order to facilitate efficient and effective browsing of the contents. The section headings are bolded to enhance their visibility. Tables, charts and figures are clearly labeled and enhance the content of the text. References are provided at the end of each chapter and are relevant and appropriately current. The glossary is effective and useful for the general reader, although common abbreviations and their names would have been useful. There is a comprehensive index with plentiful "see" and "see also" references. Page numbers for people and organizations are bolded. References to video titles are specifically noted. These enhancements to the index are an especially valuable feature of this work.

Reproductive Issues in America is very highly recommended for public, high school, academic and medical libraries. While it could have been improved in a few relatively minor ways, it is highly readable, informative, unbiased, and provides an excellent beginning text for anyone interested in reproductive issues. It is a very worthy addition to a comprehensive reference collection.

Horticulture—Gardens

3456. Woodland Garden: Planting in Harmony with Nature, revised edition by Roy Forster, Alex Downie. Buffalo, NY, Firefly Books, 2004. 180p., color illus., bibliog., index. ISBN 1-55297-898-2, 1-55297-744-7pbk. \$35.00, \$24.95pbk. LC Call no.: SB439.6.F73 2004.

Subjects: Woodland Gardening; Landscaping Gardening.

Reviewer: Sarah Williams, Science Librarian, Illinois State University Milner Library, ssteini@ilstu.edu

Table of Contents:

1. Designing the Woodland Garden 1
2. Building the Woodland Garden 25
3. The Canopy 41
4. The Understory 65
5. Plants of the Woodland Floor 105
6. Climbing Plants 125
7. Planting, Pruning and Maintenance 137
8. Authors' Favorite Plants 157

Epilogue 175

Bibliography 177

Index 179

The Woodland Garden defines such a garden as a relatively sheltered location with three distinct levels, which are the canopy, the under story, and the woodland floor, and the introduction emphasizes that woodland gardens are natural and unstructured, as one might suspect based on the subtitle of the book. The authors recognize that woodland gardens can be created from existing woodland, from conventional gardens and on raw land, and this book will be useful for any of these situations. **The Woodland Garden** focuses on temperate parts of the northern U.S. and Canada and on plants suitable for Zone 5 to Zone 9.

The first two chapters discuss designing and building a woodland garden. The chapter on design covers a wide range of considerations, including texture, unity, pathways, rockwork, water, and fragrance; it also includes before and after plans for three different settings. The chapter on building also discusses a wide range of topics, such as transforming a conventional garden, working with a new site, adapting an existing woodland, and replanting preparation.

The next three chapters cover the three levels of the woodland garden. Each chapter begins with a few pages of text, but most of each chapter is devoted to plant listings for that particular level. The plants are arranged alphabetically by botanical name, with a common name also given. The height, zone, and notes on character are provided, and the listings also indicate plants with scented flowers and those suitable for dry places and for alkaline soils. The Authors' Favorite Plants chapter is arranged similarly, but with longer notes on character.

The Woodland Garden also includes color photos, a bibliography, and an index. The index is weak. Although the subject coverage is adequate, the index does not include individual plants. The readers are just referred to the plant listings.

In comparing this revised edition to the 2000 edition, I found very few differences. The revised edition has some different photos and some larger photos, and the photos are spread throughout the book, unlike the 2000 edition. The authors made a few minor changes to the common names in the plant listings, and they added a few resources to the bibliography. The index in the 2000 edition appears to be more thorough than in the revised edition. Lastly, the revised edition is available in hardback and paperback, while the 2000 edition appears to only have been published in paperback.

The Woodland Garden is recommended for libraries that do not have the 2000 edition. If your library already has the 2000 edition, this revised edition is probably not necessary.

Horticulture—Lilies

3457. Lilies, by Pamela McGeorge, photographs by Russell McGeorge. Buffalo, NY, Firefly Books, 2004. 96p., color illus., bibliog., index. ISBN 1-55297-883-4, 1-55297-882-6pbk. \$22.95, \$16.95pbk. LC Call no.: SB413.L7.M44 2004.

Subjects: Lilies; Lilies—Varieties.

Reviewer: John P. Abbott, Coordinator of Collection Development, Appalachian State University Libraries, abbottip@appstate.edu

Table of Contents:

1. Lilies Through the ages 11
2. What Exactly Are Lilies 15
3. Cultivation of Lilies 22
4. The Progenitors: Lily Species 31
5. Lilies for Today's World: The Hybrids 53
6. Planting Ides 70
7. Lilies for Free: Propagation 77
8. Lilies on Display 82
9. Pest and Diseases 84

Appendices:

- I. Lilies in Cold Climates 90
- II. Sources of Lily Bulbs and Information 94

Bibliography 95

Index 96

A good broad spectrum treatment of the lily. What they are and what they are not? Lilies, strictly, are the approximately 200 species that are members of the genus *Lilium*. Calla lilies, canna lilies, arum lilies, water lilies, and daylilies are not true lilies. McGeorge's book considers only *Lilium* and the work provides an clear overview of the basic anatomy and taxonomy; distribution; cultivation; propagation; and sources for bulbs. The focus is on the wide range of domesticated species and hybrids, with selected wild species also presented. Descriptions include the usual range of height, color, shade tolerance, as well as notes on fragrance and pest resistance. Photographs are plentiful and nicely reproduced. The index is sufficient. A concise, modestly priced guide targeted to floral gardeners. Highly-recommended for libraries with gardening or horticultural collections.

Horticulture—Maples

3458. Maples, by Rosemary Barrett, photographs by Derek Hughes. Buffalo, NY, Firefly Books, 2004. 96p., color illus., bibliog., index. ISBN 1-55297-885-0, 1-55297-884-2pbk. \$22.95, \$16.95pbk. LC Call no.: SB413.M365B37 2004

Subjects: Maple; Trees.

Reviewer: Anne Osterman, Public Services Librarian, Western Piedmont Community College Library, aosterman@wpcc.edu

Table of Contents:

1. Cultivation 11
2. *Acer Palmatum* 19
3. Other Japanese Maples 37
4. Born in North America 43
5. Maples from Other Lands 49
6. Landscaping with Maples 55
7. Companion Planting 65
8. Landscaping with Maples in Containers 83

Epilogue 89

Sources of Maples in North America 94

Bibliography 95

Index 95

Although it is not without its problems, **Maples** is a fairly effective, enthusiastic introduction to landscaping with maples. Barrett presumably titled this book so that it would parallel her other publications, **Magnolias** and **Hostas**, but the work would have been better served by a more qualified title (**A Practical Introduction to Landscaping with Maples**, for example) because it is not remotely comparable in size or scope to other similarly focused books of recent publication: **Maples for Gardens: A Color Encyclopedia** by C.J. van Gelderen and D.M. van Gelderen (1999) and **An Illustrated Guide to Maples** by Antoine le Hardy de Beaulieu (2001, English translation 2003).

Maples can be divided into two general sections: descriptions of maple species/cultivars/hybrids and landscaping with maples. The descriptive section is organized first by general geographic origin (Japan or North America, for example), then by groupings of shape or color (weeping or variegated, for example), then alphabetically by species, and then, with rare exception, alphabetically by cultivar. This is significantly different from the other books mentioned above, which organize primarily by species name, and it emphasizes the book's pleasure-reading, rather than reference, leanings.

The textual description of each tree includes coloring (including seasonal changes), approximate height and width, and an estimated extreme hardiness zone. (This is a little ambiguous, as the introduction implies that one zone will be given at the end of each entry, indicating "the coldest areas in which the particular plant is likely to survive through an average winter," but, for almost all, a range of zones is given.) Descriptions of leaf shape, bark texture and coloring, rate of growth, seeds, and flowers are also occasionally present.

One fault of **Maples** lies in the relationship between its text and illustrations. While the photographs are certainly pleasing enough (many are quite exceptional), the path between the description of the tree and the picture of the tree is often frustrating. The layout is such that the reader's eye must search all over the page for the corresponding tree, and some are even separated by a page turn. All too often, there is no corresponding picture whatsoever, much less a series of pictures that show seasonal changes or leaf details. This is especially true in the chapter on companion planting. In the two-page layout that forms the majority of the discussion about planting bulbs near maple trees (pages 78-79), for example, over ten different plants are described, many of which are not especially common and which sound visually intriguing. The only one pictured, however, is the ubiquitous daffodil.

Maples does have two distinct advantages for the pleasure-reader over the other more comprehensive works mentioned above. It is more concise and therefore more digestible, and because it is not directly a reference work, Barrett is free to be opinionated and informal. Sometimes Barrett does get a little overly dramatic (of 'October Glory,' Barrett writes, "I would be bereft without it,") but many readers will doubtlessly appreciate the conversational tone of the book.

Recommended (with reservations) for collections already possessing more comprehensive works about landscaping with maples.

Horticulture—Roses

3459. Old-Fashioned and David Austin Roses, by Barbara Lea Taylor, photographs by Juliet Nicholas. Buffalo, NY, Firefly Books, 2004. 96p., color illus., bibliog., index. ISBN 1-55297-881-8; 1-55297-880-Xpbk. \$22.95, \$16.95pbk. LC Call no.: SB411.6.E53.T39 2004.

Subjects: Old Roses; English Roses.

Reviewer: Kathy Fescemyer, Life Science Librarian, Pennsylvania State University Life Sciences Library, kaf12@psulias.psu.edu

Table of Contents:

1. History 9
2. Once-Flowering Old-Fashioned Roses 13
3. Repeat-Flowering Old-Fashioned Roses 31
4. David Austin Roses 55
5. Cultivation 73
6. Landscaping with Old Roses 85
7. Decadent Diversions 90

8. Useful Addresses 92
9. Bibliography 94
10. Index 95

Old-fashioned and David Austin Roses provides specialized information on these types of roses. The first chapter is a concise history of the rose and its relationships to humans. Chapters 2, 3 and 4 describe once-flowering old-fashioned roses, repeat-flowering old-fashioned roses and David Austin roses. Entries provide a description of the cultivars, and basic historical and growing information. Eye-catching photographs by Juliet Nicholas appear on every page of the volume. Chapter 5 provides general information on the cultivation of roses. The focus of chapter 6 is using roses in all aspects of landscaping. The book concludes with ideas for using roses, a single page of useful addresses, a short bibliography, and an index.

This book is recommended for all libraries academic, public, and special, which have horticultural collections.

3460. *Reliable Roses*, by Philip Harkness, photography by Steve Wooster. Buffalo, NY, Firefly Books, 2004. 144p., color illus., bibliog., index. ISBN 1-55297-893-1, 1-55297-892-3pbk. \$29.95, \$19.95pbk. LC Call no.: SB411.H36 2004.

Subjects: Roses; Rose Culture.

Reviewer: Kathy Fescemyer, Life Sciences Librarian, Pennsylvania State University Life Sciences Library, kaf12@psulias.psu.edu

Table of Contents:

Introduction 6
Easy Road to Perfect Roses 10
Plant Directory 42
List of Suppliers 140
Index 141

Reliable Roses states that its purpose is "to make growing roses easier and more fun" and fulfills this promise superbly. The author, Philip Harkness, is an authority and lover of roses. He has been part of the family business, Harkness Roses, for over 30 years.

The book contains two main sections. The first section provides basic information on growing roses in practical not technical language. Designing the garden, choosing the roses, pests and diseases, pruning and maintaining the plants are discussed. Directions and explanations are straightforward and easy to understand. The second section provides entries for 70 roses of all different types with superior photographs for each entry. The entries present information on flower properties such as color, shape, size, and scent, plant properties such as shape, size, position, and hardiness, and foliage properties such as color, health check, and garden uses and an overall assessment of the plant.

An excellent introduction to growing roses, this book is highly recommended for all libraries, academic, public, and special, with horticultural collections.

Medicine—Alternative

3461. *Encyclopedia of Folk Medicine: Old World and New World Traditions*, by Gabrielle Hatfield. Santa Barbara, CA ABC-CLIO, 2004. 392p., illus., bibliog., index. ISBN 1-57607-874-4. LC Call no.: R733.H376 2004. NLM Call no.: WB 13 H362e 2004.

Subjects: Alternative Medicine—Encyclopedias; Traditional Medicine—Encyclopedias; Medicine, Traditional—Encyclopedias—English.

Reviewer: Robert B. Ridinger, Chair, Electronic Information Resources Management, Northern Illinois University Founders Memorial Library, rridinger@niu.edu

Table of Contents:

Abortion to Yew 1
Index 385

The title of this unusual reference work is somewhat misleading, in that materials outside the combined heritage of folk medicines, home remedies, and myths about disease causation and prevention constructed in Ireland, Britain and North America are not treated. That said, the volume fills a distinct gap in the reference literature of medical anthropology, botany and folklore for these regions, while fitting comfortably into the tradition of reference works on herbal remedies. Users should be aware that, in addition to profiling specific plants and their histories of usage, individual diseases and health conditions such as childbirth, tuberculosis, eczema and scurvy are examined from a folk medicinal perspective. Each entry is accompanied by lengthy bibliographies of selected books and articles for further investigation, and is cross-referenced to related subjects. Illustrations are far fewer than might have been expected in a work of this nature and range from reproductions of medieval woodcuts and paintings to photographs of living plants and animals and advertisements for witch hazel and tonic. The compiler is a well-published English botanist with twenty years research experience on plant medicines in the Scotland and England during the nineteenth century and an Honorary Research Associate at Kew Gardens. A useful addition to the science reference collections of public, college and university libraries, and as a supplemental source of historical background for medical and nursing collections.

Medicine—Internal—Allergies

3462. Plant Food Allergens, edited by E. N. Clare Mills, Peter R. Shewry. Ames, IA, Blackwell Publishing, 2004. 219p., illus., bibliog., index. ISBN 0-632-05982-6. \$139.99. LC Call no.: RC596.P56 2004. NLM Call no.: WD 310 P713 2004.

Subjects: Food Allergy; Vegetables; Phytochemicals—Allergenicity; Allergens—Immunology—Europe; Food Hypersensitivity—Immunology—Europe; Plant Proteins—Adverse Effects—Europe; Plants, Edible—Adverse Effects—Europe.

33 contributors.

Reviewer: Amy Paster, Associate Librarian, Pennsylvania State University Life Sciences Library, alp@psulias.psu.edu

Table of Contents:

1. Food Allergies 1
2. The Classification, Functions and Evolutionary Relationships of Plant Proteins in Relation to Food Allergies 24
3. The 2S Albumin Proteins 42
4. Plant Lipid Transfer Proteins 57
5. The cereal alpha-Amylase/Trypsin Inhibitor Family Associated with Bakers' Asthma and Food Allergy 70
6. Latex Allergy and Plant Chitinases 87
7. Profilins 105
8. Bet v 1-Homologous Allergens 125
9. Plant Seed Globulin Allergens 141
10. The Role of Common Properties in Determining Plant Food Protein Allergenicity 158
11. Assessing the Allergenicity of Novel and GM Foods 171
12. Monitoring of and Technological Effects on Allergenicity of Proteins in the Food Industry 196

Index 213

A European funded network called PROTALL brought together over 30 scientists with expertise in food allergens to focus on the relationship between the allergenic potential of plant food proteins, their molecular structures, their biological activities, their processing history and their interactions with other food components, such as fats. The network completed its work in 2000 and this volume highlights the results of their investigation.

As stated in the preface “a first book to present a coherent account of plant proteins as allergens to humans. It begins to make sense of why some types of proteins are more allergenic than others, and provides a unique source of information on particular groups of proteins in relation to their structure, function and phylogenetic relationships.” The editors have authored numerous articles dealing with plant proteins. Both Shewry and Mills have most recently published an article together in volume 244 of **Methods in Molecular Biology** on protein extraction from plant tissues. Dr. Clare Mills is currently a researcher at the Institute of Food Research, Norwich Laboratory, Norwich, UK and Dr. Peter Shewry is the head of the Long Ashton Research Station, Department of Agricultural Sciences, University of Bristol, Bristol, UK.

The preface offers a brief history of the problem along with enough explanation for the non-scientist to understand the situation. The twelve chapters go into a lot more depth and are written for researchers. Each chapter contains a lengthy list of references. The illustrations are black and white except for eleven color plates in the chapter on Profilins.

Plant Food Allergens has a definite EU slant but will still be of great interest to plant, allergy, food, and agricultural scientists and clinicians, chemists, and nutritionists. This title is recommended for research and university libraries.

Also recommended is **Adverse Reactions to Food** edited by Judith Buttriss, The report of the British Nutrition Foundation Task Force (Blackwell Science 2002).

Medicine—Internal—Cancer

3463. Complete Natural Medicine Guide to Breast Cancer: A Practical Manual for Understanding, Prevention and Care, by Sat Dharam Kaur, preface by Carolyn Dean. Buffalo, NY, Robert Rose/Firefly Books, 2003. 382p., bibliog., index. ISBN 0-7788-0083-0, 0-7788-0080-6pbk. \$29.95, \$18.95pbk. LC Call no.: RC280.B8K38 2003.

Subjects: Breast—Cancer—Alternative Treatment; Breast—Cancer—Prevention; Naturopathy.

Reviewer: Peg Burnette, Systems/Reference Library Technical Assistant, University of Illinois at Chicago Library of the Health Sciences Peoria, phburn@uic.edu

Table of Contents:

1.	What Is Your Risk of Developing Breast Cancer	13
2.	Getting to Know Our Breasts	35
3.	Understanding the Hormone Puzzle	59
4.	Environmental Impact on Breast Health	101
5.	Detoxifying Our Bodies	131
6.	Activating Our Lymphatic and Immune Systems	171
7.	Eating Right for Breast Health	200
8.	Nutritional Supplements for Breast Health	241
9.	Psychological and Spiritual means of Preventing Breast Cancer	266
10.	Breast Disease Treatments	295
11.	Working with Healthcare Professionals	319
	Resource Directory	336
	References	341
	Further Reading	370
	Index	377

Sat Dharam, author of this book, is a registered naturopathic doctor.

According to the Council on Naturopathic Registration and Accreditation, naturopathic doctors “are conventionally trained in subjects such as anatomy, physiology, counseling, dietary evaluations, nutrition, herbology, acupuncture, muscle relaxation and structural normalization, homeopathy, iridology, exercise therapy, hydrotherapy, oxygen therapy and thermal therapy.” Seven guiding principles are the make up the underlying philosophy of naturopathic medicine.

- Do no harm
- Recognize the healing power of nature
- Identify the cause

- Involve the total person
- Teach rather than treat
- Identify the source
- Prevent disease

These principles provide the framework upon which this book's approach to healthcare is built. While the title indicates that this work is meant for women who either have breast cancer, or may be at risk, the information provided goes well beyond the realm of breast cancer by offering a lifestyle approach to nutrition, wellness, exercise and responsible living that transcends medicine.

The Introduction is a "sermon" about the degradation of our environment and a condemnation of life in today's chemical world. With ample drama and sensationalism, the author challenges women to boycott products deemed environmentally unfriendly and to support only environmentally responsible companies and the goods they provide. As part of a "Path of Purification," readers are urged to avoid plastics, nuclear power and chlorine, among other substances. Simplify and consume less is the mantra that the author suggests will bring about crucial changes in the way we live.

The book is arranged into eleven chapters, each dealing with one aspect of breast cancer. The first page of each chapter includes a brief introduction and a table of contents, as well as a list of exercises, charts, checklists and worksheets provided in the chapter. Within the chapters, the margins of each page include "facts", little tidbits pertaining to the chapter topic, and "prevention" strategies for managing one's own health. Information is presented in easy to digest paragraphs set off with headings and subheadings. The writing is straightforward and a glossary at the beginning of the book provides easy access to medical and technical definitions. Charts, worksheets, and other illustrations enrich the text while providing practical and useful tools for readers to use to assess their own health. Each chapter concludes with a summary that reviews the highlights of the chapter.

Taken in total the information tends to be quite overwhelming. Recreating one's diet, nutritional supplements and exercise regimen, while focusing on cleansing one's body, and cleansing one's environment with "homemade" products, is a daunting undertaking. Indeed, the author advises that this book is perhaps best digested with a group so that discussion and reflection ease the overwhelming nature of the topics.

Several chapters, such as Psychological and Spiritual, Lifestyle and Healthcare, Environmental, and Dietary Risk Factors, have implications well beyond breast health and breast cancer. The section on "Working with Healthcare Professionals, provides a "Breast Health Data Sheet" that would be valuable to any woman with breast health issues.

The author provides an extensive list of references, broken down by chapter that reflects scientific research spanning the last thirty years. A "Further Reading" section and a "Resources Directory" provide plenty of opportunity for further research and edification. I was, however, turned off by a *Product Order Form* at the back of the book that offers "Health Breast Products" including "Liver Loving Formula" and "Immune Power Formula." And it did occur to me as I leafed through the chapters that this "Program" is probably not within financial reach of many individuals.

Still, there is a great deal of food for thought and the book does provide preventive measures and therapeutic approaches outside the bounds of conventional medicine. It would be a good addition to any cancer or women's health consumer collection and would provide an alternative approach in professional medical collections.

3464. Culture of Human Tumor Cells, edited by Roswitha Pfragner, R. Iam Freshney. Hoboken, NJ, Wiley-Liss, 2004. 435p., illus., bibliog., index. (Culture of Specialized Cells). ISBN 0-471-43853-7. \$99.95. LC Call no.: RC2367.C776 2004.

Subjects: Cancer Cells; Human Cell Culture.

Reviewer: Brett S. Powers, Cancer Center Librarian, St. Mary's Mercy Medical Center The Cancer Center, powersb@trintiy-health.org

Table of Contents:

1. Growth of Human Lung Tumor Cells in Culture 1

2.	Culture of Normal and Malignant Gastric Epithelium	23
3.	Establishment of Cell Lines from Colon Carcinoma	67
4.	Pancreatic Cancer-Derived Cultured Cells	81
5.	The Establishment and Characterization of Bladder Cancer Cultures In Vitro	97
6.	Long-Term Culture of Normal and Malignant Human Prostate Epithelial Cells	125
7.	The Development of Human Ovarian Epithelial Tumor Cell Lines from Solid Tumors and Ascites	145
8.	Culture of Cervical Carcinoma Tumor Cell Lines	179
9.	Primary Culture of Human Mammary Tumor Cells	205
10.	Myoepithelium	221
11.	Multistage Head and Neck Squamous Cell Carcinoma	261
12.	Culture of Melanocytes from Normal, Benign, and Malignant Lesions	289
13.	Establishment and Culture of Human Leukemia-Lymphoma Cell Lines	319
14.	In Vitro Culture of Malignant Brain Tumors	349
15.	Culture of Human neuroendocrine Tumor Cells	373
	Suppliers	405
	Index	419

Covering the “most common” tumor cell cultures is the aim of this book. The fifteen chapters cover such tumor cells as: lung, brain malignant gastric and prostate epithelium, bladder, cervical carcinoma and others.

Arrangement of the book is rather straightforward. Each tumor cell type gets its own chapter; their organization scheme is not apparent, but not really necessary in a book like this either. All the supplier information is nicely listed in an appendix.

This book should be used as a reference source for culturing different tumor types. It is a cookbook of sorts, but instead of recipes it has protocols. Instead of cooking a lasagna you are culturing tumor cells. Each chapter has an introduction of the tumor type and then discusses safety considerations, preparation of media and regents, establishing short-term and long-term cultures, and characterization of the cells.

Researches dealing with human tumor cells are the primary audience for this book. Anyone involved in laboratory research of neoplasms would find this book useful, if not necessary.

This book is highly recommended for libraries supporting laboratory cancer cell research, and for large University libraries with medical research components. Libraries supporting clinical medical facilities only would not need it.

3465. Handbook of Cancer Risk Assessment and Prevention, by Graham A. Colditz, Cynthia J. Stein. Boston, MA Jones and Bartlett Publishers, 2004. 343p., bibliog., index. ISBN 0-7637-1883-1. \$32.00. LC Call no.: RC268.48.C64 2004. NLM Call no.: QZ 39 C688h 2004.

Subjects: Cancer—Risk Factors—Handbooks, Manuals, etc.; Cancer—Prevention—Handbooks, Manuals, etc.; Neoplasms—Prevention and Control—Handbooks; Risk Assessment—Handbooks.

Reviewer: Kay Plesca, Consultant, kayp621@aol.com

Table of Contents:

1.	Section I: Risk and Risk Communication	1
2.	Section II: Prevention	11
3.	Section III: Behavioral Factors	159
4.	Section IV: Questionnaire and Risk Assessment	237
	Glossary	285
	References	297
	Index	333

The **Handbook of Cancer Risk Assessment and Prevention** is a soft cover text focusing on the 14 most common cancers and the way to prevent their occurrence. These 14 cancers represent 77% of all cancer cases and 70% of all cancer deaths. In fact, the top four cancers: prostate cancer, breast cancer, lung cancer and colorectal cancer are 52% of new cases and 50% of all cancer deaths.

Each chapter begins with a box providing "Recommendation to Patients" and "For Good Measure." These points are basic, common-sense advice like "Eat a variety of fruits and vegetables: Aim for at least 5 servings a day" and "Don't smoke." Each cancer is addressed in terms of topic areas such as "Modifiable Risk Factors", "Non-modifiable Risk Factors" and "Factors Under Study."

The **Handbook of Cancer Risk Assessment and Prevention** is in four major sections, the first looking at risk in general, the second going over each of the 14 major cancers individually, the third addressing areas of concern across cancers and the fourth providing specific risk assessment for each of the 14 major cancers. This clear and specific division of information makes the book very user friendly.

The book contains extensive references, an excellent index, boxed information tables, bullet items and subheadings within chapters which make the information easy to find and understand. Overall, the book is packed with clearly written, straightforward information for cancer patients and those who wish to avoid becoming a cancer patient.

The **Handbook of Cancer Risk Assessment and Prevention** is highly recommended for public libraries and should be in the waiting room of every oncologist.

3466. Handbook of Cancer Vaccines, edited by Michael A. Morse, Timothy M. Clay, H. Kim Lyerly. Totowa, NJ, Humana Press, 2004. 592p., 2 CD-ROM, illus., bibliog., index. (Cancer Drug Discovery and Development). ISBN 1-58829-209-6. \$185.00. LC Call no.: RC271.I45H36 2004. NLM Call no.: QZ 266 H236 2004.

Subjects: Cancer Vaccines—Handbooks, Manuals, etc.

83 contributors.

Reviewer: Jitka Hurych, Professor and Head of Science, Engineering and Business Department at Northern Illinois University Founders Memorial Library, jitka@niu.edu

Table of Contents:

Part I. Basic Science of Tumor Antigens and Immune Activation

1. biology of the Cancer Vaccine Immune Response 3
2. The Rational design of T-Cell Epitopes with Enhanced Immunogenicity 11
3. Identification of Tumor Antigens Using Substraction and Microarrays 19
4. Tumor Antigen Discovery with T Cells 31
5. Targeting Viral Antigens for the Treatment of Malignancies 49
6. Immune Defects in Cancer 65
7. Escape of Tumors from the Immune System 85

Part II. General Vaccine and Immunotherapy Strategies

8. Immune Adjuvants 99
9. Heterologous Prime -Boost Vaccination in Tumor Immunotherapy 115
10. Peptide-Based Vaccines 121
11. Antibody-Inducing Cancer Vaccines Against Cell-Surface Carbohydrate Antigens 137
12. Anti-Idiotypic Vaccines 157
13. Pox Viral Vaccines 175
14. Utility of Adenovirus-Based Vectors for Multiple Cancer Vaccine Approaches 193
15. Alphaviral-Based Strategies for the Immunotherapy of Cancer 203
16. DNA Vaccine 225
17. Whole -Cell Vaccines 249
18. GeneModified Tumor-Cell Vaccines 253
19. Hapten-Modified Tumor Vaccines 275
20. Chaperone Proteins/Heat Shock Proteins as Anticancer Vaccines 297
21. Dendritic Cell Vaccines 317
22. Exosomes for Immunotherapy of Cancer 331
23. Immunocytokines for Cancer Immunotherapy 341
24. T-Cell doptive Immunotherapy 359

Part III. Tumor-Specific Vaccine Development

25. Melanoma Vaccines 379
26. Allogenic Melanoma Lysate Vaccines 397

- 27. Renal Cancer Vaccines 415
- 28. Vaccines for Hematological Malignancies 425
- 29. Vaccines for Immunotherapy of Prostate Cancer 451
- 30. Vaccine Therapy for Breast and Ovarian Cancers 465
- 31. Vaccine Therapy for Gastrointestinal Cancers 491
- 32. Vaccines for Lung Cancer 505
- 33. Vaccines for Other Tumors 513
- Part IV. Clinical Trials and Immune Analyses
- 34. Clinical Trial designs for Therapeutic Vaccine Studies 519
- 35. Analysis of cellular Immune Responses in Cancer Vaccine Trials 527
- 36. Analysis of Humoral Immune Responses in Vaccine Trials 543
- 37. Regulatory Issues Affecting Tumor Vaccines 563
- Index 577

Activating the immune system to control tumors has been of interest to medical community for a long time. This handbook, edited by three doctors from Duke University Medical center, is intended to provide a comprehensive description of the scientific background for therapeutic vaccines, the challenges to their development and their current use in treatment of cancer.

Contributions to this volume are by medical researchers from major medical centers and universities in the United States and France. First few chapters provide an overview of the immune response to cancer vaccines, methods of antigen discovery and issues regarding all vaccines. Several other chapters are devoted to the development of the major vaccines strategies, such as peptide- based, antibody inducing and dendritic cell vaccines.

The book also analyzes clinical results for cancer vaccines that could be used to treat many of the common cancers, such as renal, prostate, breast, ovarian, gastrointestinal, lung, and others. Final chapters deals with clinical trials as well as with regulatory issues affecting cancer vaccines.

The authors recognize that the future of successful commercial development of tumor vaccines is still at "a regulatory crossroads" despite the promise that these products hold for cancer patients. They also recognize that there is a need for better evaluation of the potency of various vaccine classes.

The book is accompanied by a CD-ROM that contains an electronic version of the book. It can be viewed on the computer and also on PDA. There are instructions for installation with an email and phone number for the help desk.

Highly recommended for medical schools and hospital libraries.

Medicine—Internal—Cystic Fibrosis

3467. Cystic Fibrosis: Everything You Need to Know, by Wayne Keptron. Buffalo, NY, Firefly Books, 2003. 190p., bibliog., index. (Your Personal Health Series). ISBN 1-55297-740-4. \$14.95. LC Call no.: RC858.C95.K46 2004.

Subjects: Cystic Fibrosis—Popular Works; Cystic Fibrosis—Treatment—Popular Works.

Reviewer: Pamela Ortega, Assistant Professor, Library Services, Eastern Illinois University Library, cfpfo@eiu.edu

Table of Contents:

- 1. What is Cystic Fibrosis 1
- 2. The CF Gene—What Went Wrong 10
- 3. CF and the Respiratory System 23
- 4. CF and the Gastrointestinal System 54
- 5. Unusual Manifestations of CF 82
- 6. Problems of Adolescence and Adulthood 90
- 7. Issues of Respiratory Therapy 104
- 8. Issues of Eating and Nutrition 129
- 9. Lung Transplantation and Gene Therapy 158
- Table of Drug Names 170

Glossary 171
Further Resources 178
Index 180

The author states in the introduction that this book was written to give information on how to cope and live with Cystic Fibrosis, a genetic disorder affecting mostly Caucasians in Europe, North and South America and Australia. Formerly, it killed almost all sufferers in infancy, but now with current life expectancy around 35 years in developed countries, people with CF must find ways to cope with all aspects of living as adults with CF. Little space is devoted to current research and almost none to future, possible research.

Since it is directed to the layman, the book is written with as little medical jargon as possible or with tactfully inserted explanations of terms. The text accompanies many of the various aspects of the disease with examples of individuals' encounters with them, providing realistic views of the symptoms and the ensuing therapeutic measures to deal with them.

Of particular interest are those sections, which deal with the manifestation of other diseases or medical conditions with people with CF, for example, diabetes. Previously, the complications of diabetes were less severe in persons with CF and actually developed more slowly. However, with the increased life expectancy of the CF population, it is unknown at this time if those complications from diabetes will become more severe. Likewise, special considerations and problems in pregnancy and childbirth are examined in the book. End of life care is also approached succinctly and matter of factly. More detail is devoted to respiratory therapy, nutrition, and lung transplantation.

The book is very easy to understand and provides an excellent overview of coping with this disorder. A glossary, information on relevant drug therapy, and a short list of helpful web sites and organizations and books are included. Illustrations are sparse, however, and having more drawings or photographs would aid the understanding of the basics of the physiology affected by the disease. Nevertheless, the book is highly recommended for all public libraries and undergraduate academic collections.

Medicine—Internal—Sexually Transmitted Diseases

3468. Encyclopedia of Sexually Transmitted Diseases, by Jennifer Shoquist, Diane Stafford. New York, NY, Facts On File, 2004. 326p., bibliog., index. (Facts on File Library of Health and Living). ISBN 0-8160-4881-9. \$65.00. LC Call no.: RC200.1.S525 2004.

Subjects: Sexually Transmitted Diseases—Encyclopedias.

Reviewer: Robert B. Ridinger, Chair, Electronic Information Resources Management, Northern Illinois University Founders Memorial Library, rridinger@niu.edu

Table of Contents:

Entries A-Z 1
Appendixes 229
Bibliography 283
Index 303

Part of **Facts on File Library of Health and Living**, this timely volume addresses one of the major health concerns facing both the United States and the planet in general. The introduction should be required reading for all librarians attempting to deal with questions on sexually transmitted diseases, as it gives a concise yet coherent overview of the major infections currently rampant and the problems of public education, myths of popular health, and the most recent developments up to early 2003. Entries are clearly written and sufficiently detailed to convey technical information without excessive use of jargon, which given the subject is something of an achievement, with limited cross-references as appropriate. Six appendixes cover online STD resources, major organizations involved in researching and treating STD, a timeline of the HIV/AIDS pandemic beginning with the earliest identified cases in 1980 and extending through 2002, guidelines for effective home care of AIDS patients from the Centers for Disease Control, legal requirements for education on STDs and AIDS (the majority emphasizing contraception or abstinence) in the forty states where they exist, minors' rights to consent to HIV/AIDS services (as of January 2003), and the signs and symptoms, modes

of transmission, tests, treatments, prevention strategies and possible complications of common STDs. Diseases profiled included chlamydia, hepatitis (all four varieties), gonorrhea, and syphilis. A bibliography of books and articles (the latter chiefly online full-text) and an index by personal name, organization and subject complete the work. Given the demand for information on sexually transmitted diseases, this work belongs in the science reference collections of high school, public, college and university libraries, while medical and hospital librarians will find it a usefully concise review of an often-tangled subject.

Medicine—Internal—Viruses

3469. Ebola and Marburg Viruses: A View of Infection Using Electron Microscopy, by Elena I. Ryabchikova, Barbara B. S. Price. Columbus, OH, Battelle Press, 2004. 211p., illus., bibliog., index. ISBN 1-57477-131-0. \$65.00. LC Call no.: QR201.E16R97 2004. NLM Call no.: WC 501 R988e 2004.

Subjects: Ebola Virus Disease—Pathogenesis; Marburg Virus Disease—Pathogenesis; Electron Microscopy; Filoviridae Infections—Pathology; Filoviridae—Pathogenicity; Microscopy, Electron.

Reviewer: Kristine M. Alpi, Lecturer in Public Health, Weill Medical College of Cornell University, kalpi@att.net

Table of Contents:

1. Introduction 1
2. Materials and Methods 11
3. Morphology of Filoviruses 19
4. Filoviral Infections 57
5. Microscopic Pathology over the Course of Filoviral Infection 85
6. Blood Disorders in Filoviral Infections 105
7. Time Course of the Pathological Changes in Filovirus-Infected Animals 131
8. Immunopathology 159
9. Conclusions 177

References 187

Index 205

Ebola and Marburg, two viruses from the filovirus family, have gained the attention of the public through books and movies. These highly infectious viruses can only be safely studied in a Biosafety Level 4 laboratory. The small number of these laboratories worldwide has limited the amount of experimental research on filoviruses. All of the experiments documented in this book were performed at the Laboratory of Ultrastructural Investigations and Pathomorphology of the State Research Center of Virology and Biotechnology Vector of the Russian Ministry of Public Health by Dr. Elena I. Ryabchikova. The acknowledgments introduce the collaborating researchers and disclose the grant support to the laboratories and investigators. Dr. Ryabchikova has published in the peer-reviewed literature in English and in Russian. The experiments documented here differ from many done previously in that they use low virus doses in order to capture the time effects of animals developing defensive measures in response to exposure to the viruses. The experiments utilized various tissues from a variety of animals and discuss the findings in relation to what is known about the pathology of the virus in humans. The coherent narrative that accompanies the images emphasizes the pathogenesis of filoviruses.

The second author, Dr. Barbara B. Saunders-Price, is an environmental chemist whose contribution was to help shape Dr. Ryabchikova's experiments into a coherent exploration and documentation of Ebola and Marburg. Although writing for an audience of scientists, the authors do an excellent job of explaining the terminology of virology in documenting the use of electron microscopy for virus visualization. The text would be accessible to biology students or laboratory technicians interested in the topic.

Adequate white space and reasonably sized type make this book comfortable to read. Image quality is vital for a book devoted to electron microscopy. There are over 60 micrographs listed in the list of figures and tables in the front of the text. These are excellent quality and labeled in a way that identifies the primary features in each image. Schematics and diagrams are clear and simple. Figures and tables are also identified in the index. The index provides cross-references for acronyms.

References for the entire book are noted parenthetically in the chapters and presented at the end of the volume. The reference dates range from 1940 - 2003. Special attention is paid to unpublished literature such as virus taxonomy websites and email from the Pro-Med list (a Global Program for Monitoring Emerging Diseases) and Russian-language literature not indexed in MEDLINE. The reference list does have a few inconsistencies; some citations vary in style and translated titles are not always identified. Some titles are translated into English and followed by the name of the original language at the end of the citation. Others are left in the original language. Some titles such as the work by Kachko et al. are translated, but the original language is not listed.

Virologists will be most interested in this book, but it would also be useful to biologists and students interested in electron microscopy techniques and infectious diseases. Programs in infectious disease, international health and veterinary and zoonotic diseases will want to have this book in their collections. It is recommended for all biology and biomedical science library collections.

Medicine—Occupational

3470. Encyclopedia of Work-Related Illnesses, Injuries, and Health Issues, edited by Ada P. Kahn, foreword by Delbert H. Meyer. New York, NY, Facts On File, 2004. 434p., bibliog., index. (Facts on File Library of Health and Living). ISBN 0-8160-4844-4. \$65.00. LC Call no.: RC963.A3K348 2004.

Subjects: Medicine, Industrial—Encyclopedias; Occupational Diseases—Encyclopedias; Industrial Accidents—Encyclopedias; Industrial Hygiene—Encyclopedias.

Reviewer: Sue Norman, Coordinator of Library Instruction, Hampton University Harvey Library, sue.Norman@hamptonu.edu

Table of Contents:

Entries A-Z 1
Appendixes 337
Bibliography 378
Index 387

Dr. Kahn has contributed another useful volume to the **Facts on File Library of Health and Living**. She has previously contributed to three others: **The Encyclopedia of Mental Health**, **The Encyclopedia of Phobias, Fears, and Anxieties**, and **Stress, A-Z**, indicating her awareness for the need for informative reference books on topics that affect us all.

If, as it states in the foreword by Dr. Del Meyer, “the **Journal of the American Medical Association** reports that 3.6 million Americans were treated for occupational illnesses or injuries in 1998,” there is a great need for the layperson to understand just what those work-related illnesses, injuries and health issues might be. Dr. Kahn provides brief, lucid, and jargon-free definitions and explanations of the items she includes. A chart provided by U.S. Bureau of Labor Statistics illuminates the information she provides under her very first term, “absenteeism.” References to additional entries in the volume are provided.

After the entry for “dancers (professional),” there are references to see the entries on “performance anxiety’ performing arts medicine; stress.” Reference to journal articles and books are provided where available. The provision of a professional association with its contact information, including a URL if available, is also included. Under the entry for “humor,” the information to reach the International Laughter Society is listed. The appendixes are filled with information that can help amplify the brief explanation provided earlier in the book. An additional resource list of professional organizations and contact information is one of the appendixes. Dr. Kahn has provided an excellent reference tool where someone can begin research on a topic in this area and can use the appendixes to find additional suggestions for resources. This encyclopedia is an excellent choice for any library needing to provide information in this area.

Microbiology

3471. Clinician's Dictionary of Pathogenic Microorganisms, by James H. Jorgensen, Michael A. Pfaller. Washington, DC, ASM Press, 2004. 273p, bibliog.. ISBN 1-55581-280-5. \$29.95. LC Call no.: QR81.J67 2004. NLM Call no.: QW 13 J82c 2004.

Subjects: Pathogenic Microorganisms—Dictionaries; Microbiology—Classification—Dictionaries; Bacteria—Dictionary—English; Fungi—Dictionary—English; Parasites—Dictionary—English; Viruses—Dictionary—English.

Reviewer: Agnes A. Bongero, Consultant, retired Senior Information Resource Specialist, Henry Ford Hospital Sladen Library, abongero@hotmail.com

Table of Contents:

Bacteria 1
Fungi 145
Parasites 189
Viruses 237

The names and classification of microorganisms have been changing with increasing rapidity as newer tools in molecular biology are developed and newer organism groups are associated with disease. The authors of this book recognize that practicing physicians, house officers, students, epidemiologists, infection control personnel and other health professionals need updated information that is concise and practical yet comprehensive as they deal with the microorganisms associated with human disease.

The authors state that they have developed this reference as a starting place to gain an understanding of the significance of recovering various microorganisms from human clinical specimens and to interpret laboratory reports that may include new or unfamiliar names. To this purpose the authors have provided a pocket-sized dictionary reflecting current microbial taxonomy with cross-references for older names. The entries are precisely reflective of the book's title - that is, brief indications in a dictionary format of taxonomy and the associated types of infections. Organization of the book is based on the four classic categories of microorganisms: bacteria, fungi, parasites and viruses. Individual entries are listed alphabetically for each category. Each unit culminates with a list of references from contemporary resources for further in-depth study.

The publishers indicate that in addition to the print volume, this title is also available in PDA format as an E-book compatible with Palm and all other PDA operating systems. The reviewer did not have access to this format for comment in this review.

The target audiences for the book are clinicians and students who will appreciate the compactness of this reference. The book is also recommended for health, medical and hospital libraries as an useful "ready" reference for quick access to information on microorganisms.

Military Weapons

3472. Introduction to Weapons of Mass Destruction: Radiological, Chemical, and Biological, by R. Everett Langford. Hoboken, NJ, Wiley-Interscience, 2004. 394p., illus., bibliog., index. ISBN 0-471-46560-7. \$89.95. LC Call no.: U793.L36 2004.

Subjects: Military Medicine; Nuclear Medicine.

Reviewer: Robert B. Ridinger, Chair, Electronic Information Resources Management, Northern Illinois University Founders Memorial Library, rridinger@niu.edu

Table of Contents:

1. Weapons of Mass Destruction (WMD) 1
Part 1. Radiological Weapons
2. Nuclear Radiation 33
3. Brief History of Nuclear Weapons 47
4. Types of Nuclear Weapons 83
5. Effects of Nuclear Weapons 98

6.	Nuclear Weapons Detection, Protection, and Decontamination	110
7.	Medical Treatment of Wounds from Nuclear Weapons	130
Part 2. Biological Weapons		
8.	Brief History of Biological Weapons	139
9.	Bioweapon Diseases and Medical Treatments	152
10.	Delivery Systems for Bioweapons	193
11.	Biological Weapon Detection, Protection, and Decontamination	201
Part 3. Chemical Weapons		
12.	Introduction to Chemical Agents	211
13.	Effects of Chemical Weapons and Medical Treatments	225
14.	Delivery Systems for Chemical Weapons	281
15.	Chemical Agent Safety, Protection, Detection, and Decontamination	286
Part 4. Survival, Planning, and Contacts		
16.	Summary of Weapons of Mass Destruction	315
17.	References	347
Glossary 367		
Index 383		

In the post- 9/11 world, the phrase “ weapons of mass destruction “ has come to be widely used by both media and medical professionals and the general public in a security context, with the unexamined assumption made that all parties involved are agreed as to the exact types of weapons specified. The author of this detailed introductory work, the former commander of the United States Army’s Toxicology Research Laboratory from 1991 to 1998, begins by defining the general category of these weapons and the similarities and differences among biological, radiological and chemical weapons technologies, examining factors such as toxicity, dispersion, and those systems of human physiology most affected by specific agents. The first section, on the broad heading of “ Radiological Weapons “, defines alpha, beta, gamma and neutron radiation and their impacts on the body, gives a history of the development of nuclear weapons and their range of types and delivery systems (including the much-discussed “ dirty “ bomb), and treatment issues ranging from blast injuries to the loss of medical personnel and psychological incapacity. Biological weapons, perhaps the most feared and certainly the most familiar to the general public, are explored in the second section, with 39 types ranging from anthrax, typhus, plague and dengue fever to less known threats such as genetically modified fungi, zoonotic diseases, and natural toxins defined and profiled by symptoms and treatment options if extant. followed by chapters on possible bioweapons delivery systems, protection and decontamination. Chemical weaponry such as poison gas (an example being the Tokyo subway attack of 1995 by Aum Shinrikyo using Sarin, a nerve toxin) is discussed in chapters twelve through fifteen, with personal levels of protection, the issue of exposure versus dosage, reviewed in addition to the history of chemical warfare since ancient times, types of chemicals used (agents to cause blistering, bleeding, choking, nerve damage, hallucinations, smoke, fire and the death of plant life) and modes of attack. The closing chapter on “ Survival, Planning and Contacts “ addresses the chief fears of the majority of readers, speaking to matters such as planning possible evacuation routes, effective responses if an attack is suspected or verified (for both families and in workplace situations) and providing data on contacting the state offices of the Federal Emergency Management Administration (FEMA), the Centers for Disease Control) and the Occupational Safety and Health Administration (OSHA). A list of readings for further education and a glossary of compounds and terminology are appended. Given the level of public ignorance and confusion on this admittedly chilling subject, this book should be added to the science collections of every public, college and university library in the United States.

Natural History

3473. South Sea Islands: A Natural History, by Alison Balance, foreword by Frans Lanting, photographs by Rod Morris. Buffalo, NY, Firefly Books, 2003. 160p., color illus., bibliog., index. ISBN 1-55297-609-2. \$35.00. LC Call no.: QH198.A1.B17 2003.

Subjects: Natural History—Oceania; Natural Resources—Oceania; Marine Ecology—Oceania; Natural History—Madagascar; Oceania; Madagascar.

Reviewer: Amy Schuler, Manager of Information Services, Institute of Ecosystem Studies, schulera@ecosudies.org.

Table of Contents:

1.	Fiji	14
2.	Madagascar	26
3.	French Polynesia	36
4.	Hawaii	48
5.	Galapagos	60
6.	Komodo	72
7.	Sulawest	84
8.	New Guinea	94
9.	Tasmania	104
10.	New Caledonia	116
11.	New Zealand	126
12.	Lord Howe and Phillip Islands	138
13.	Easter Island	148
	The Way of the Dodo	157
	Glossary	158
	Bibliography	158
	Index	159

South Sea Islands: A Natural History is as close to bushwhacking through a rainforest or trekking to the edge of a volcanic crater as most of us will ever come. But if you are interested in learning about the ostentatious birds that inhabit the Pacific islands, or perhaps the reptiles that scavenge amongst the volcanic ash there, this book is for you. It serves as a fine introduction to the natural history of the Pacific islands, where natural forces and isolation have led to quite a variety of organisms and systems. On the islands of New Zealand and the Marquesas, for instance, giant centipedes measuring over 8 inches in length hunt small lizards. The unusual soils of New Caledonia are home to many endemic plant species. Descriptions of these creatures, features and processes are supported by stunning photographs, which in and of them are worth the cost of this book. At the end of the book the reader will find a very brief glossary (a bit too brief), as well as a bibliography and a general index. This book is recommended for natural history enthusiasts, travelers, high school students and undergraduates in zoology, biodiversity and related programs.

Nursing

3474. Instruments for Clinical Health-Care Research, 3rd edition edited by Marilyn Frnk-Stromborg, Sharon J. Olsen. Boston, MA, Jones and Bartlett for Oncology Nursing Society, 2004. 713p., bibliog., index. ISBN 0-7637-2252-9. \$64.95. LC Call no.: RT81.5.I57 2004. NLM Call no.: WY 20.5 I59 2004.

Subjects: Nursing—Research; Nursing Research—Methods.

70 contributors.

Reviewer: Ursula Ellis, Reference Librarian, University of Oklahoma Health Sciences Center Robert M. Bird Library, ursula-ellis@ouhsc.edu

Table of Contents:

Part I. Overview		
1.	Evaluating Instruments for Use in Clinical Nursing Research	3
2.	Tool Adaptation to Reduce Health Disparities	20
3.	Measurement Issues with Children and Adolescents	33
4.	Measurement Issues with the Elderly	47
5.	Measurement Issues Concerning Linguistic Translations	56
6.	Physiologic Measurement Issues	65
7.	Cultural Considerations in Research Instrumentation Development	73
Part II. Instruments for Assessing Health and Function		
8.	Measuring Function	83
9.	Measuring Cognitive Status	100
10.	Single Instruments for Measuring Quality of Life	128
11.	Multiple Instruments for Measuring Quality of Life	150
12.	Social Support	164

13. Measuring Coping 200
 14. Measuring Hope 215
 15. Instruments to Measure Aspects of Spirituality 229
 16. Measuring Body Image 243
 17. Measuring Sexuality 257
 18. Measuring Dietary Intake and Nutritional Outcomes 278
 19. Measuring Sleep 293
 20. Attitudes Toward Chronic Illness 315
 21. Selecting a Tool for Measuring Cancer Attitudes 335
 22. Measuring Family Outcomes 352
 23. Measuring Anxiety 362
 24. Measuring Depression 376
 25. Measuring Healthy Lifestyle 401
- Part III. Instruments for Assessing Health-Promotion Activities
26. Measuring Self-Care Activities 419
 27. Measuring Breast and Colorectal Cancer Screening Beliefs and Behaviors 428
 28. Measuring Information-Seeking Behaviors and Decision-Making Preferences 455
 29. Measuring Alterations in Taste and Smell 472
- Part IV. Instruments for Assessing Clinical Problems
30. Measuring Bowel Elimination 487
 31. Measuring Cardiac Parameters 498
 32. Measuring Physiologic Parameters in Obstetric Nursing 512
 33. Measuring Dyspnea 523
 34. Measuring Fatigue 538
 35. Measuring Mobility and Potential for Falls 570
 36. Measuring Nausea, Vomiting, and Retching 583
 37. Assessing the Oral Cavity 594
 38. Measuring Pain 603
 39. Measuring Skin Integrity 645
 40. Assessing Vaginitis 663
- Index 683

The third edition of **Instruments for Clinical Health-Care Research** contains one new chapter and substantial revisions and updates to the other 32 chapters. Over 70 nurses, most of them PhDs, contributed chapters on an array of mental and physical health measures to this text. Section I of the book describes general measurement issues such as reliability and validity. Sections II, III and IV cover individual topics in the areas of health and function, health promotion, and clinical problems. Each chapter in these sections outlines and critiques the instruments available to measure the topic under discussion, such as cognitive status, depression, or fatigue. Typically the instruments are summarized in a table at the end of the chapter, in addition to being discussed in the text. Most chapters conclude with an abstract of one or more exemplar studies on the topic, in which an instrument is used skillfully in a published journal article.

Nurses, other healthcare professionals and students engaging in research or seeking an instrument to evaluate patients will find **Instruments for Clinical Health-Care Research** very useful. The authors state that anyone who has taken a basic research methods course should have no difficulty with the book's content, and even without this background readers will find the text clearly written and understandable. Abundant references, a detailed index, and the summary instrument guides at the end of most chapters make the book a good quick reference tool. Highly recommended for medical and academic libraries

3475. A Nurse's Handbook of Spiritual Care: Standing on Holy Ground, by Mary Elizabeth O'Brien. Boston, MA Jones and Bartlett publishers, 2004. 224p., index. ISBN 0-7637-3291-5. \$24.95. LC Call no.: RT85.2O373 2004.

Subjects: Nursing—Religious Aspects; Religion and Medicine, Spirituality.

Reviewer: Kimberley Robles Smith, Reference Librarian, Fresno State University Madden Library, kimberle@csufresno.edu

Table of Contents:

1.	Spirituality in Nursing	1
2.	Nursing Assessment of Spiritual Needs	13
3.	The Nurse-Patient Relationship	29
4.	Spiritual Care of the Acutely Ill Person	51
5.	Spiritual Care of the Chronically Ill Person	63
6.	Spiritual Care of the Ill Child	81
7.	Spiritual Care of Families	93
8.	Spiritual Care of the Older Adult	103
9.	Spiritual Care in Death and Bereavement	117
10.	Parish Nursing	133
11.	Spiritual Care in Mass Casualty Disasters	153
12.	Prayer in Nursing	165
Epilogue		181
Appendices:		
A.	Nurses' Prayers for the Sick	183
B.	A Nurse's Psalm of Reverence for Life	199
C.	A Nurse's Way of the Cross	201
Index		211
Scripture Index		223

Easy to use and nicely organized, this handbook updates a great deal of information from O'Brien's previous publication, **Spirituality in Nursing: Standing on Holy Ground** (Jones & Bartlett Pub., 1999). New information includes a chapter on assessing patients' spiritual needs. Chapters are organized by spiritual care needs for specific groups (children, families, older adults) or situations (death and bereavement, etc.). All prayers, mediations, and assessment tools are from a Christian perspective. Each chapter is well documented and ends with a list of references; most of the research is dated from the 1990s. Contains both a subject and scripture index.

Recommended for nursing collections in settings that provide spiritual as well as medical care.

Obstetrics

3476. Cesarean Recovery, by Chrissie Gallagher-Mundy. Buffalo, NY, Firefly Books, 2004. 128p., color illus., bibliog., index. ISBN 1-55297-904-0. \$19.95. LC Call no.: RG761.G34 2004.

Subjects: Cesarean Section—Popular Works; Mothers—Health and Hygiene.

Reviewer: Jim Oliver, Chemistry Librarian, Michigan State Biomedical and Physical Sciences Library, oliver2220@hotmail.com

Table of Contents:

Introduction		6
1.	Having a Cesarean	12
2.	Going Home	32
3.	Weeks 2-12	60
4.	Weeks 13-24	90
5.	Return to Normal	110
Frequently Asked Questions		124
Index		126

This is a colorful book that has many pictures showing happy women and happy couples with their children. It discusses recovery techniques after a cesarean. The surgery is covered in the first ten pages, and the remainder of the book, 127 pages total, covers the aftermath of the surgery and recovery process that one should follow. Many terms such as lochia are not defined, nor are any of the possible complications of a cesarean. This book covers step-by-step, week-by-week how to get back to normal activity after having a cesarean. The reader would likely be a person who has had the cesarean and trying to recover. The book would likely be purchased for someone who just had the operation. Its usefulness is limited for the library. It could be useful for a public library, or more likely a hospital library accessible to patients. The book is really limited for the women who just had a cesarean and wishes to follow the guidelines for aftermath care.

Paleontology

3477. Fossil Frogs and Toads of North America, by J. Alan Holman. Bloomington, IN, Indiana University Press, 2003. 246p., illus. (part in color), bibliog., index. ISBN 0-253-34280-5 \$79.95. LC Call no.: QE868.A5H65 2003.

Subjects: Anura, Fossil—North America.

Reviewer: Teresa Bowden, Reference Librarian, Villanova University Falvey Memorial Library, teresa.Bowden@villanova.edu

Table of Contents:

1.	Introduction	1
2.	Systematic Accounts	38
3.	Chronological Accounts	187
Epilogue		215
References		221
General Index		239
Taxonomic Index		245
Site Index		247

This book is composed of three main sections, the core of which consists of detailed systematic descriptions and localities of the known fossil frogs and toads (anurans) of North America. Extinct anurans are fully discussed and illustrated, with some being updated and redescribed based upon recently discovered fossil material. Those taxa still living are presented with modern characteristics, ecological attributes and modern ranges of genera and species.

The volume begins with an introductory chapter, which includes an overview of the anurans, with a definition of the order Anura and its specializations. Also covered are accounts of the anuran skeleton and bones used in paleontological studies. The final chapter presents a detailed chronological account of the anurans. The epilogue discusses the classification and phylogeny of the anurans as related to the fossil record.

The book is well organized with occasional black and white supporting illustrations and a section of nice color plates of example species. A comprehensive list of references is included, along with general, taxonomic and site indexes. This title is recommended for academic or research collections supporting paleontology.

3478. Great Dinosaur Controversy: A Guide to the Debates, by Keith M. Parson. Santa Barbara, CA, ABC-CLIO, 2004. 294p., illus., bibliog., index. (Controversies in Science). ISBN 1-57607-922-8. \$85.00. LC Call no.: QE861.4.P38 2004.

Subjects: Dinosaurs.

Reviewer: Robert B. Ridinger, Chair, Electronic Information Resources Management, Northern Illinois University Founders Memorial Library, rridinger@niu.edu

Table of Contents:

1.	Why All the Fuss	1
2.	Fearfully Great Lizards	15
3.	Huxley Agonistes	33
4.	Range War	49
5.	Whose Dinosaur	71
6.	Cold-Blooded, Warm-Blooded, or Neither	87
7.	The Raptor and the Hummingbird	105
8.	Sometimes You Have a Really Bad Day, and Something Falls Out of the Sky	121
Appendices:		
I.	Dinosaurs and Their World	145
II.	Evolution	155
Glossary		169
Chronology		173

References 177
Documents 185
Index 291

Issued as part of ABC-CLIO's **Controversies in Science** series, this smoothly written work explores some of the various battles that have erupted within paleontology since the identification of the first fossilized remains of the genera that would be given the name of " dinosaur " in the early nineteenth century. After discussing the factors and dynamics of controversy within the practice of science, Parsons moves to the actual identification of the first dinosaur teeth in 1825 by Gideon Mantell and the extended discussions on the characteristics of the species that would become known as *Iguanodon* raised by anatomist Richard Owen in his survey of British fossil reptiles. With this as foundation, the appearance and impact of Charles Darwin's **The Origin of Species** in 1859 (and the effect a reasoned evolutionary theory exerted on the debates over dinosaurs through the writings and argument of prominent biologist Thomas Huxley, an avid Darwinian supporter) is next considered. The intellectual collision between Richard Owen's metaphysical concept of " archetypes " (not dissimilar to that put forward by Plato) and processual evolutionary change is illustrated by the discovery of *Archaeopteryx*. Shifting the focus from the theater of European science to the post- Civil War United States, the fourth chapter, " Range War ", recounts the birth of interest in dinosaurs through the rancorous squabble over the operation of natural selection and the feud over access to the rich site of Como Bluff, Wyoming between Edward D. Cope and Othniel Marsh. (A parallel feud between Andrew Carnegie and J.P Morgan over ownership of major dinosaur remains was to result in Carnegie's museum in Pittsburgh housing one of the most significant paleontological collections on the continent.) Of particular interest is the fifth chapter, " Whose Dinosaur? ", where the sharp divisions between highly proprietary nineteenth American paleontologists, many of whom regarded their interpretation of dinosaur structure and function as cast in stone, and their (often critical) European counterparts. Other controversial topics related to dinosaurs examined are the question of warm- vs. cold-blooded, the possibility of extinction through a meteor impact (carefully set within the historical context of the idea of catastrophism as a mechanism of species change) , and the idea that birds are living descendants of a specific evolutionary line from theropod dinosaurs. An unusual feature of this volume is the inclusion of selections from the primary reportage on the discoveries profiled in the " Documents " section, offering both the generalist and specialist readers a sample of the contemporary flavor of argument. Although frankly described by its author as a work intended for classroom use, the precision approach to paleontological debate makes this work a useful addition to the science collections of large public , college and university libraries. Museum libraries supporting collections of paleontological materials will also find it valuable source of data for public presentation on the history of the discipline.

Pediatrics

3479. Assessing Children's Well-Being: A Handbook of Measures, by Sylvie Naar-King, Deborah A. Ellis, Maureen A. Frey. Mahway, NJ, Lawrence Erlbaum, 2004. 307p., bibliog., index. ISBN 0-8058-3173-8. \$32.50. LC Call no.: RJ50.C479 2004.

Subjects: Children—Medical Examinations—Handbooks, Manuals, etc.; Children—Diseases—Diagnosis—Handbooks, Manuals, etc.; Child Development—Testing—Handbooks, Manuals; Medical Screening—Methodology—Handbooks, Manuals, etc.

Reviewer: Sue Norman, Coordinator of Library Instruction, Hampton University Harvey Library, sue.Norman@hamptonu.edu

Table of Contents:

1. Health status and Quality of Life 1
2. Adherence 27
3. Pain Management 41
4. Child Behavior 61
5. Child development 89
6. Child Coping 115
7. Cognitions, Attributions, and Attitudes 133
8. Environment 147
9. Consumer Satisfaction 169

Appendix 189

Author Index 299

The compilers state in their preface “the goal of this volume is to provide a single source reference to key screening instruments for clinicians and researchers who work with pediatric populations. They present information about 64 screening instruments in the main body of the work and in the appendix, provide additional information on questionnaires, checklists, etc. The items described cover a wide range of topics: quality of life, keeping to medical regimens, behavior, coping, etc. The information about the instruments themselves is presented in a very structured and understandable manner. For each general subject of instrument presented, there is a general introduction, then information on: the source, the availability of the instrument with a discussion of the purpose, standardization, and norms, reliability and validity, a summary of the strengths and limitations of the instrument, and additional readings on the instrument. The last section for each instrument should prove valuable for those seeking an evaluative measure. One weakness is the lack of a subject index, though the table of contents is quite detailed.

William G. Wagner, in his review of this title for the April, 2004 issue of the journal, **Child Abuse & Neglect**, writes “the text complements other handbooks on traditional psychological assessment tools (Kamphaus & Frick, 1996; Merrill, 1999),” and suggests that the book will be very useful for pediatric specialists.

This book is highly recommended for purchase not only for pediatric specialists but also for anyone with an interest in the psychological instruments being developed and used with children.

3480. Attention-Deficit/Hyperactivity Disorder: A Clinical Guide to Diagnosis and Treatment for Health and Mental Health Professionals, 3rd edition by Larry B. Silver.

Washington, DC, American Psychiatric Publishing, 2004. 247p., bibliog., index. ISBN 1-58562-131-5. LC Call no.: RJ506.H9S545 2004. NLM Call no.: WS 350.8.A8 S587a 2004.

Subjects: Attention-Deficit Hyperactivity Disorders; Attention Deficit Disorder with Hyperactivity—Diagnosis; Attention Deficit Disorder with Hyperactivity—Therapy.

Reviewer: Mark Spasser, Chief, Library and Information Services/Associate Professor, Jewish Hospital College of Nursing and Allied Health Library, mas1200@bjc.org

Table of Contents:

Part 1. Introduction and Overview

1. Introduction 1
2. The Continuum of Neurologically Based Disorders 9
3. History of Attention Disorders Including Attention-Deficit/Hyperactivity Disorder 17
4. Etiology of Attention-Deficit/Hyperactivity Disorder 23

Part 2. Diagnosis

5. Clinical Findings Suggestive of Attention-Deficit/Hyperactivity Disorder 33
6. Establishing the Diagnosis 37

Part 3. Associated Disorders

7. Specific Learning Disabilities 53
8. Regulating Disorders and Tic Disorders 77
9. Secondary Psychiatric Disorders and Social Difficulties 89

Part 4. Treatment

10. Basic Treatment Concepts 111
11. Educating the Individual and the Family 115
12. Clinical Interventions with the Individual, Parents, or Family 123
13. Working with the School System 129
14. Behavioral Management 137
15. Psychopharmacology 159
16. Controversial Therapies 183

Part 5. Special Topics

17. Attention-Deficit/Hyperactivity Disorder in Adults 201
18. Relevant Educational and Civil Laws 211

Part 6. Conclusions

19. Conclusions

Resources 229

Index 235

This third edition of **Attention-deficit/Hyperactivity Disorder** provides an overview of diagnosis and treatment of attention-deficit/hyperactivity disorder, incorporating the most recent findings on diagnosis, associated disorders, and treatment, as well as new information on ADHD in adults (neurobiologically based conditions associated with ADHD are reviewed as well). Silver looks at how ADHD affects school performance, family life, and peer interactions, and offers guidance on differential diagnosis, working with families, managing medication, and explaining ADHD to parents.

Addressing the diurnal management issues faced by physicians and mental health professionals who see patients with ADHD, **Attention-deficit/Hyperactivity Disorder** discusses such practical concerns as making differential diagnoses, working with children and families in a multimodal treatment setting to manage a medication regimen, and explaining ADHD to parents. The book is indexed and contains a brief section on resources, including organizations related to ADHD and learning disorders.

One point of concern: Silver focuses heavily on the psychopharmacological management of ADHD (although there are discussions of behavioral management and other "controversial" treatment modalities) and pays scant attention to other, associated disorders. In other words, the central concern of **Attention-deficit/Hyperactivity Disorder** is the diagnosis and drug treatment of ADHD.

Covering ways to work with the school system as well as new and controversial therapies, **Attention-deficit/Hyperactivity Disorder** is essential reading for all who care for individuals with ADHD. This is an excellent scientific review of ADHD for health care practitioners who treat children with ADHD. Parents will be interested in the book as well. **Attention-deficit/Hyperactivity Disorder** offers information based on scientific research, not on anecdote or sensational journalistic report, and will make a valuable purchase for many libraries — health sciences and public.

Pharmacology

3481. Clarke's Analysis of Drugs and Poisons in Pharmaceuticals, Body Fluids and Postmortem Material, 3rd edition edited by Anthony C. Moffat, M. David Osselton, Brian Widdop, Laurent Y. Galichet. Chicago, IL, Pharmaceutical Press, 2004. 2v., 1,935p., illus., bibliog., index. ISBN 0-85369-473-7. \$545.00. LC Call no.: RA1221.C55 2004.

Subjects: Analytical Toxicology; Drugs—Analysis; Poisons—Analysis.

44 contributors.

Reviewer: Victoria Tamborrino, Associate Professor and ILL Librarian, St John's University Library, tamborr@stjohns.edu

Table of Contents:

Volume 1: Part 1—Chapters

1. Hospital Toxicology 3
2. Drugs of Abuse 37
3. Alcohol, Drugs and Driving 53
4. Workplace Drug Testing 68
5. Forensic Toxicology 80
6. Postmortem Toxicology 94
7. Drugs in Saliva 109
8. Hair Analysis 124
9. Drug Abuse in Port 134
10. Therapeutic Drug Monitoring 148
11. Quality Control and Assessment 161
12. Pharmacokinetics and Metabolism 172
13. Natural Toxins 189
14. Pesticides 202
15. Volatile Substances 227
16. Medicinal Products 239
17. Solid Dosage Form Identification 249

18. Metals and Anions 259
19. Colour Tests 279
20. Immunoassays 301
21. Ultraviolet, Visible and Fluorescence Spectrophotometry 313
22. Infra-red Spectroscopy 328
23. Near-Infrared Spectroscopy 346
24. Raman Spectroscopy 358
25. Nuclear Magnetic Resonance Spectroscopy 368
26. Mass Spectrometry 379
27. Thin-Layer Chromatography 392
28. Gas Chromatography 425
29. High Performance Liquid Chromatography 500
30. Capillary Electrophoresis for Drug Analysis 535
31. Emerging Techniques 550

Subject index following p. 564

Volume 2: Part Two—Monographs 567

Volume 2: Part Three: Indexes of Analytical Data 1,725

Subject index following p. 1,936

A full revision and expansion of the second edition of this text, published in 1986 under the title *Clarke's Isolation and Identification of Drugs*, assures this well-known reference will remain THE definitive text for the analysis of drugs and poisons. The new title, **Clarke's Analysis of Drugs and Poisons**, reflects the greater scope of the monographs which now include more pesticides and other poisonous substances, veterinary products, drugs misused in sport and drugs of abuse. About 400 new monographs have been added to the third edition, with priority based on the importance of the substances they cover in one of these areas: drugs of abuse, forensic toxicology, hospital emergency toxicology, doping in sport, drugs subjected to therapeutic drug monitoring, and environmental toxicology.

The book is in two volumes and comes packaged in a sturdy slipcase. In thirty-one chapters, the first volume covers analytical toxicology techniques and their applications. Immunoassays, various forms of spectrophotometry and spectroscopy, mass spectrometry, thin-layer, gas, and high performance liquid chromatography, and capillary electrophoresis are among the techniques discussed. All chapters from the second edition have been rewritten and new chapters have been added which discuss alcohol and drugs in driving, workplace drug testing, postmortem toxicology, drugs in saliva, hair analysis, natural toxins, volatile substances and other topics.

Volume two contains over 1,730 monographs detailing physical properties, analytical methods, pharmacokinetic data, ultraviolet, infrared and mass spectra, and therapeutic and toxicity data of drugs and poisons. Style and form of presentation are similar to the previous edition and are clear and concise. Sixteen indexes of analytical data follow the monographs. A subject index for both volumes is included as well.

A CD-ROM edition of Clarke is now available; it has the obvious advantages of rapid text searching and more frequent updating than the print version.

Clarke's Analysis of Drugs and Poisons is highly recommended for all clinical and forensic toxicologists, pathologists, students of toxicology and drug analysis, and the libraries that serve these populations.

3482. Complete Natural Medicine Guide to the 50 Most Common Medicinal Herbs, by Heather Boon, Michael Smith. Buffalo, NY, Robert Rose/Firefly Books, 2004. 352p., illus., bibliog., index. ISBN 0-7788-0082-2, 0-7788-0081-4pbk. \$29.95, \$19.95pbk. LC Call no.: RS164.B66 2004.

Subjects: Herbals; Naturopathy; Herbs—Therapeutic Use.

Reviewer: Beth Thomsett-Scott, Science Librarian, University of North Texas Science and Technology Library, bscott@library.unt.edu

Table of Contents:

Introduction 10

Glossary of Botanical Medicine Terms 16
Medicinal Herbs for Health Conditions 17
Alphabetical listing—Alfalfa to Willow 19
References 275
Index 345

The **Complete Natural Medicine Guide to the 50 Most Common Medicinal Herbs** is a compilation of well-written and easily understandable reviews of herbal medicines that pharmacists in clinical practice are most frequently asked about. The Canadian College of Naturopathic Medicine collected and organized the data. After the data gathering, which drove the selection of the specific herbs, the prepared manuscripts were sent to the Canadian Council on Continuing Education in Pharmacy for approval. The first edition was published in 1999 as *The Botanical Pharmacy*. In 2003, the information was updated, revised and re-written for the general reader to produce this current edition. This second edition is now aimed at physicians and pharmacists who want a concise reference to enable them to provide accurate and informative advice to their patients, as well as for patients and consumers who are seeking additional information on medicinal herbs.

The Introduction provides information on legislation, dosage forms, descriptions, and describes the format of the reviews. While the one page glossary does list the more important terms, a longer one would be useful since the authors are suggesting that this item is aimed towards the general public who may be unfamiliar with a lot of the terminology. The next section categorizes the herbs by the conditions that they are reported to treat. This section is a highly useful reference guide in itself.

Each review provides a “thumbnail sketch” which is essentially a concise summary of the review contents. The reviews offer information on family name, synonyms, parts used, current medicinal uses, therapeutic effects, active constituents, adverse effects, interactions, and more. The text is well written and easy understandable.

References are grouped together at the end of the book and displayed by chapter. This may be confusing for readers who expect to see the references at the end of each chapter and perhaps frustrating for those wanting to move quickly between the text of the chapter and the associated references. References are appropriately current and come from a variety of sources.

Headings and subheadings are bolded for efficient scanability, and the frequent use of lists also aid in this regard. The font is green and the paper is glare free to make it restful on the eyes of the reader. The very comprehensive index provides “see” references and is a valuable asset to this item.

The **Complete Natural Medicine Guide to the 50 Most Common Medicinal Herbs** is highly recommended for public and academic libraries, as well as for pharmacists and physicians.

3483. Medicinal Plants of the World: An Illustrated Scientific Guide to Important Medicinal Plants and Their Uses, by Ben-Erik van Wyk, Michael Wink. Portland, OR, Timber Press, 2004. 480p., color illus., bibliog., index. ISBN 0-88192-602-7. \$39.95. LC Call no.: RS164 2004.

Subjects: Medicinal Plants; Materia Medica—Vegetable; Plants, medicinal; Phytotherapy—Methods.

Reviewer: Lynn C. Westney, Associate Reference Librarian, University of Illinois at Chicago Daley Library, lynnhatt@uic.edu

Table of Contents:

Introduction 7
Medicine Systems of the World 8
Plant Parts Used 16
Dosage Forms 18
Use of Medicinal Plant Products 20
Active Ingredients 22
Quality Control and Safety 24
Efficacy of Medicinal Plant Products 25
Regulation of Herbal remedies and Phytomedicines 26
The Plants in Alphabetical Order 27
Health Disorders and Medicinal Plants 351

Overview of Secondary Metabolites and Their Effects 371
Quick Guide to Commercialised Medicinal Plants 395
Glossary 433
Further Reading 442
General Index 445

This collaborative venture between a South African professor of botany and a German professor of pharmaceutical biology has resulted in an impressive photographic guide to the most commonly used and best known medicinal plants of the world, including their botanical origins, traditional uses, active ingredients, pharmacological effects, and evidence of efficacy (if known). More than 320 medicinal plants are included accompanied by over 800 full color photographs. The photography is excellent and captures the plants at many stages of the growing and cultivating process. This is most useful for plant identification by the neophyte. It contains also a checklist of 900 of the most important and well known medicinal plants of the world. **Medicinal Plants of the World** is aptly named and written for the general public. It is not intended as a medical handbook for self-treatment.

Natural products and their derivatives represent more than fifty percent of all drugs in clinical use in the world. Codeine, morphine, and quinine are three of the best-known plant-derived medicines. New anticancer drugs such as taxol and vincristine have been developed from plants. The international consumer market for herbs and botanicals is estimated at about 18 billion U.S., which accounts for almost half of the total market for supplements such as vitamins, minerals, and homeopathic products.

Arrangement is alphabetical by scientific name. For each plant the most commonly used vernacular names are given in several languages (including Afrikaans, Chinese, French, German, Hindi, Italian, Khoi, Sanskrit, Sotho, Spanish, and Zulu) at the bottom of each page. This inclusion demonstrates the authors' sensitivity to their intended audience and is a nice touch to their book.

Here are just a few of the useful pieces of information to be gleaned about the idiosyncratic nature of the practical aspects of many well-known plants. Papain, the enzyme derived from the papaya, is used both as a meat tenderizer and to reduce cloudiness in beer. The toxic *Sanguinaria canadensis* or bloodroot as it is commonly called, is used widely in commercial expectorants and cough syrups. Mouthwash and toothpaste contain bloodroot derivatives, which have been found in clinical studies to effectively inhibit dental plaque. Cranberries, which have become astoundingly popular in recent years, are used to treat urinary tract disorders and because of their high vitamin C content, used also to prevent scurvy.

The chapter entitled "Health Disorders and Medicinal Plants" contains information on how to treat these disorders through plant-derived treatment, e.g., phytomedicine. Again, readers of this book are advised to consult health care professionals and not to use this book as a recipe for self-treatment. The results could be dangerous and/or life threatening.

For those seeking additional information, an excellent international bibliography current through 2003 is provided although without any descriptive or evaluative annotations.

Medicinal Plants of the World is highly recommended for academic and public library botanical, gardening, holistic, and health science collections.

3484. Stephens' Detection of New Adverse Drug Reactions, 5th edition edited by John Talbot, Patrick Waller. Hoboken, NJ, John Wiley, 2004. 745p., bibliog., index. ISBN 0-470-84552-X. \$175.00. LC Call no.: RM302.5 2004.

Subjects: Drugs—Side Effects; Drugs—Toxicology; Drugs—Side Effects—Handbooks; Drug Therapy—Adverse Effects; Adverse Drug Reaction Reporting Systems; Pharmaceutical Properties—Adverse Effects; Product Surveillance, Postmarketing.

18 contributors.

Reviewer: Dale A. Stirling, Information Specialist, Intertox, dastirling@intertox.com

Table of Contents:

1.	Introduction	1
2.	Adverse Drug Reactions and Interactions	92
3.	Toxicology and Adverse Drug reactions	128
4.	Clinical Trials	167
5.	Clinical Laboratory Safety Data in Drug Studies	244
6.	Statistics	301
7.	Causality and Correlation in Pharmacovigilance	329
8.	Managing Drug Safety Issues with Marketed Products	345
9.	Regulatory Aspects of Pharmacovigilance	375
10.	Legal Aspects of Pharmacovigilance	453
11.	Operational Aspects of the Drug Safety Function within a Pharmaceutical Company	493
12.	Dictionaries and Coding in Pharmacovigilance	533
13.	Safety of Biotechnology Products	559
14.	Vaccine Safety Surveillance	571
15.	Ethical Issues in Drug Safety	591
16.	A Model for the Future Conduct of Pharmacovigilance	649
Appendix I		667
Appendix II		705
Bibliography		709
Index		721

This fifth edition speaks in part to the value and staying power of this book as the best-known work in the field of pharmacovigilance. At the confluence of toxicology and pharmacology, pharmacovigilance is a concept not well known outside of pharmacology circles. Yet, it is a critical element in detecting new adverse drug reactions (ADR). Therefore, the state aim of this book is to cover the “issues and problems involved in the detection of new adverse drug reactions throughout the life cycle of a medicine from animal studies through to clinical trials, its introduction to the market, followed by wide clinical use and eventual decline in use or withdrawal.”

The comprehensive coverage of pharmacovigilance is reflected in the book’s 16 chapters by leading experts in the field. Not surprisingly, the first chapter provides an overview of the history of pharmacovigilance, a good starting point for those new to the field and those wishing to refresh their knowledge of its heritage. The subsequent chapter provides an in-depth review of the basics of adverse drug reactions and interactions, including mechanisms, risk factors, detection, management and prevention. The third chapter reviews the interface between toxicology and adverse drug reactions.

Chapters four through seven focus on clinical trials, clinical laboratory safety in drug studies, the analysis and presentation of safety data, and causality in pharmacovigilance. Chapter four highlights the collection of safety data and establishing an adverse drug reaction profile while Chapter five delves deeper to expand on the importance of laboratory safety data in drug studies. Statistical issues related to detecting adverse drug reactions in clinical trials and through observational data are considered. Chapter seven is perhaps the most interesting chapter in the book, as it discusses, with a historical bent, the importance of causality and correlation in pharmacovigilance. It considers 11 points that need to be considered in the clinical diagnosis of suspected ADRs and causality assessment of reports in pharmacovigilance.

Chapters eight through fifteen focuses on the business, regulatory, and technical issues surrounding pharmacovigilance. Important issues such as risk communication and the international role of regulation in pharmacovigilance are presented in chapters eight and nine. On a similar note, legal aspects of pharmacovigilance are discussed in chapter ten. Technical issues of case-handling and the creation of dictionaries and coding are discussed in chapters 11 and 12. Safety, which is an issue of utmost concern in drug development, is reviewed in chapters 13 and 14 with a focus on the safety of biotechnology products (especially proteins) and safety related to vaccines. Not surprisingly, ethics are a concern in pharmacovigilance and this issue is discussed in chapter 15. The highlight here is ethics in clinical trials and ethics in the pharmaceutical industry in general. The final chapter in the book presents a model for the future conduct of pharmacovigilance. The proposed model presents five elements considered to be essential for excellence in pharmacovigilance—best evidence, robust scientific decision-making, tools for protecting public health, culture of scientific development, and outcome measures and audit. The book includes two appendices—I provide a listing of drug products

withdrawn from the pharmaceutical market for safety reasons and II provides a listing of useful web sites related to pharmacovigilance. Lastly, the book features an in-depth bibliography divided among works related to basic science, clinical trials, drug-induced diseases, ethics and law, laboratory data, pharmaceutical medicine, pharmacoepidemiology, pharmacovigilance, risks, teratogenesis, pregnancy, and lactation, and other topics.

This book presents a comprehensive and wide-ranging overview of the science of pharmacovigilance. For those entering or already experienced in the pharmaceutical sciences, this is an essential work. It seems likely that future editions will be published as new information about adverse drug reactions becomes available and it becomes necessary to communicate that information to the pharmaceutical community.

Pharmacy

3485. Sociology for Pharmacists: An Introduction, 2nd edition by Kevin Taylor, Sarah Nettleton, Geoffrey Harding. New York, NY, Taylor & Francis, 2003. 190p., bibliog., index. ISBN 0-415-27487-7; 0-415-27488-5pbk. \$99.95, \$49.95pbk. LC Call no.: RS92.T39 2003. NLM Call no.: WA 31 T243k 2003.

Subjects: Pharmacy—Social Aspects; Social Medicine; Sociology; Sociology, Medical; Pharmacy.

Reviewer: Mohan Ramaswamy, Assistant Professor and Science Librarian, Kansas State University Library, mohan@lib.ksu.edu

Table of Contents:

1. Sociology: An Introduction 5
2. Contemporary Practice of Pharmacy 19
3. Health and Illness 37
4. Seeking Help and Consulting Health Professionals 55
5. Social Factors and Health 75
6. Social Inequalities and Health 91
7. The Occupational Status of Pharmacy 113
8. Maintaining and Promoting Health 131
9. Social Research Methods 157

Index 185

This second edition of **Sociology for Pharmacists** supersedes its first edition published in 1990. This is a basic treatise of sociology as applied to the profession of pharmacy. The topics covered include the significance of various facets of sociology for pharmacists. Apart from giving a broad coverage on the status of research and facts on the subject, the authors also have incorporated a chapter on social research methods. The chapters would help the readers understand the fundamentals of sociology, and do not overwhelm them with in-depth information.

The authors have presented appropriate illustrations that include graphs, tables, quotations, flowcharts and references. Each chapter follows a conspicuously consistent format that starts with an introduction, walks through theories, facts and concepts, and finally ends with a summary. The summary is followed by a list of further readings and references. At the end of the book, a subject index is provided. The contact information of all of the three editors is provided in the book.

The audience of this book includes pharmacy students and professionals that need an introduction to sociology. The authors have organized the information so as to help students read and understand the content easily. This will be a highly useful resource for scholars in, and libraries that serve, the fields of medicine and social sciences.

Physics

3486. Advances in Amorphous Semiconductors, by Jai Singh, Koichi Shimakawa. New York, NY, Taylor & Francis, 2003. 329p., illus., bibliog., index. (Advances in Condensed Matter Science, v. 5). ISBN 0-415-28770-7. \$95.00. LC Call no.: QC611.8.A5 2003.

Subjects: Amorphous Semiconductors.

Reviewer: Randy Wallace, Science and Engineering Librarian, University of North Texas Libraries, rwallace@library.unt.edu

Table of Contents:

1. Introduction 1
2. Structure 21
3. Theory of Effective Mass 37
4. Optical Properties 57
5. Photoluminescence 96
6. \Charge Carrier-Phonon Interaction 131
7. Defects 158
8. Electronic Transport 203
9. Photoconductivity 245
10. Reversible Photoinduced Effects 277
11. Applications 306

Index 325

This book serves as a good introduction to the field of amorphous materials and discusses recent advances as well. The first two chapters introduce amorphous materials and their structure, and subsequent chapters expand upon these concepts. Each chapter begins with a description of the concept being introduced and refers to previous chapters; particularly useful for a more advanced researcher or student working on a particular aspect of amorphous materials not reading the work cover-to-cover. The final chapter describes a variety of applications for amorphous materials.

This is a well-organized and written work that makes the topic understandable and approachable. The formulae, graphs, and figures included are separated from the text and improve readability. The bolded headings and subheadings in each chapter clearly define each section. The index uses abbreviations established within the text, with parenthetical explanations of the abbreviations, which can be problematic for someone not familiar with the standards used. The coverage of the index is otherwise very good.

Advances in Amorphous Semiconductors is recommended for any academic library covering the fields of physics and/or materials science. It will be useful to students new to the field of amorphous materials and instructors teaching the field to students.

Physiology

3487. Adult Stem Cells, edited by Kursad Turksen. Totowa, NJ, Humana Press, 2004. 346p., illus. (part in color), bibliog., index. ISBN 1-58829-152-9. \$135.00. LC Call no.: QH607.A28 2004. NLM Call no.: QH 581.2 A243 2004.

Subjects: Cell Differentiation; Stem Cells; Stem Cells—Physiology.

41 contributors.

Reviewer: Dana Antonucci-Durgan, Chemistry/Biology Librarian, Stony Brook University Chemistry Library, dana.antonucci@sunysb.edu

Table of Contents:

1. Adult Stem Cell Plasticity 1
2. Spermatogonial Stem Cells 19
3. Stem Cells in Skeletal Muscle 37
4. Gene Therapy using Muscle-Derived Stem Cells 51
5. Human Dental Pulp Stem Cells 67
6. Epithelial Stem/Progenitor Cells in Thymus Organogenesis 83
7. Adult Liver Stem Cells 101
8. Endothelial Progenitor Cells 149
9. Prostate Epithelial Stem Cells 167
10. Mammary Epithelial Stem Cells 191
11. From Marrow to Brain 215
12. Adult Retinal Stem Cells 235
13. Multipotentiality of Iris Pigment Epithelial Cells in Vertebrate Eye 253

14. Stem Cell Biology of the Inner Ear and Potential Therapeutic Applications 269
 15. Engineering the In Vitro Cellular Microenvironment for the Control and Manipulation of Adult Stem Cell Responses 289
 16. Stem Cells as Common Ancestors 315
- Index 329

The use of stem cells for clinical and experimental research has drawn much debate and criticism in the past decade or so. While much of the controversy surrounds the use of embryonic stem cells, the contributors in **Adult Stem Cells** present the current state of adult stem cell research for various cell types including bone marrow, skeletal muscle, dental pulp, liver and other tissue. In 2002, Kursad Turksen edited **Embryonic Stem Cells**, which concentrated mainly on methods and protocols. While methods and protocols are referenced and mentioned in **Adult Stem Cell**, discussion of current research is the main focus.

Each chapter consists of an overall introduction to the biology and characterization of a specific stem cell type. The authors present a review of the current literature and outline experimental findings for various types of stem cells while also including current or potential clinical implications. Each chapter contains extensive lists of references for further reading and as well as a short chapter summary.

Adult Stem Cells contains black and white images of immunoassays and tissue sections as well as a four-page color insert displaying immunofluorescence images of adult stem cells expressed in various tissue types. While each chapter contains reviews for a distinct cell type, the general characterization and description of stem cell properties is a bit repetitious since most of the chapters give an overview of stem cell biology. This book contains an extensive review of liver stem cell research, including experimentation with extrahepatic tissue and sites.

The authors focus on the science rather than the political or ethical debates surrounding stem cell research. I would highly recommend this book for medical libraries as well as academic libraries at institutions with graduate programs in genetics, biochemistry, cell biology, neuroscience or molecular biology.

This is a book for graduate, post-doctoral, or professional readers.

Psychiatry

3488. Cognitive Therapy: A Practical Guide, by Dean Schuyler. New York, NY, W. W. Norton, 2003. 218p., bibliog., index. ISBN 0-393-70432-7. \$16.95. LC Call no.: RC489.C63S34. NLM Call no.: WM 425.5.C6 S397c 2003.

Subjects: Cognitive Therapy; Cognitive Therapy—Methods; Professional-Patient Relations.

Reviewer: Mark Spasser, Chief, Library and Information Services/Associate Professor, Jewish Hospital College of Nursing and Allied Health Library, mas1200@bjc.org

Table of Contents:

1. Preliminary Issues 3
 2. The Cognitive Model 25
 3. Applying the Model 67
 4. Extending the Model 95
 5. The Model in Practice 131
- Bibliography 203
Index 205

Cognitive Therapy: A Practical Guide offers trainees in psychology, psychiatry, social work, or counseling a way to learn how to effectively practice cognitive therapy. The work aspires to be a clinical tutorial: a focused conversation addressing controversial issues in psychotherapy such as how to establish a here-and-now focus, how to use selective self-disclosure, and how to replace a patient monologue with a therapeutic dialogue.

The guide is the revised edition of **A Practical Guide to Cognitive Therapy**, 1991. Like the previous edition, its purpose is to prepare students and therapists to apply a cognitive therapy model to office

practice, by telling readers "what works that therapists do" and presenting effective cognitive therapy techniques for various situations including treating depression, dealing with relationships, and growing older.

Throughout, the author attempts to shift the focus from learning about cognitive therapy to learning to actually doing cognitive therapy. Parts of the guide address the basics of the cognitive model, techniques of cognitive therapy, long-term cognitive therapy, and couples therapy. The book is indexed and contains brief a bibliography, strongly focused on the "classics."

Central to the book's goal is a series of case examples illustrating how cognitive therapy is used in therapeutic practice for students in psychology and psychiatry. Schuyler believes that telling "appropriate" stories is the most effective way to teach therapists new to cognitive therapy to help patients and that cognitive therapy is best taught by apprenticeship. The case studies are included as practical teachings and personal encouragement for trainees from all perspectives to be real and creative persons in their therapeutic practice.

Cognitive Therapy: A Practical Guide is intended for trainees in psychotherapy. Supervising therapists will find this book a useful adjunct to their own training materials. As a result, Cognitive therapy belongs in all academic libraries that support graduate training in psychotherapeutic modalities and techniques.

3489. Concise Guide to Evidence-Based Psychiatry, by Gregory E. Gray. Washington, DC, American Psychiatric Publishing, 2004. 237p., bibliog., index. (Concise Guides). ISBN 1-58562-096-3. \$29.85. LC Call no.: RC455.2.E94G73 2004. NLM Call no.: WM 100 G779c 2004.

Subjects: Evidence-Based Psychiatry; Evidence-Based Medicine—Methods; Psychiatry.

Reviewer: Lisa C. Wallis, Senior Assistant Librarian/Life and Health Sciences Liaison, San Francisco State University J. Paul Leonard Library, jwallis@sfsu.edu

Table of Contents:

1. Introduction to Evidenced-Based Medicine 1
2. The 5-Step Evidence-Based Medicine Model 11
3. Asking Answerable Questions 17
4. Searching for Answers 23
5. Clinical Trials 51
6. Systematic Reviews and Meta-Analyses 79
7. Clinical Practice Guidelines 105
8. Diagnostic Tests 121
9. Surveys of Disease Frequency 141
10. Studies of Risk or Harm 153
11. Studies of Prognosis 175
12. Evaluating Your Performance 183
13. Learning and Practicing Evidence -Based Psychiatry 189
14. Teaching Evidence-Based Medicine to Psychiatry Residents 199

Appendices:

- A. Glossary 213
- B. Statistical Formulas and Tables 219

Index 225

Since the groundbreaking work of clinical epidemiologists at McMaster University in the early 1980s, evidence-based medicine (EBM) has become a dominant model of medical education and practice. Until recently, that model has focused mostly on primary care. Recent works, however, have begun to develop the application of the model to other medical specialties and allied health practice.

The author of this book, a professor of psychiatry, has attempted to introduce mental health professionals to the concept and application of EBM. The core of the text is a summary of the 5-step EBM model and timesaving strategies for its incorporation, including an emphasis on brief summaries instead of in-depth reviews. Separate chapters discuss the types of research studies, review articles, and clinical guidelines used foster evidence-based decision-making as a supplement to clinical expertise and accepted practice. Users with little exposure to biostatistics will benefit from the

introductory materials on the statistical measures—such as odds ratios and relative risk—on which clinical decisions are based.

This pocket-sized book has been written to help psychiatrists in training, in the field, and in education teach themselves about evidence-based medicine and apply its principles to their practice. It is not intended to be a comprehensive work on EBM, instead it refers readers to other valuable texts that can provide extended information. This book's value lies in its use of examples relevant to psychiatry, helping the reader see the applicability of EBM in his or her own context. Additionally, it includes practical tips for overcoming the (occasionally daunting) task of incorporating EBM into daily practice.

The book would be a valuable addition to libraries supporting training programs in psychiatry or other mental health professions.

3490. Handbook of Narrative and Psychotherapy: Practice, Theory, and Research, edited by Lynne E. Angus, John McLeod. Thousand Oaks, CA, Sage Publications, 2004. 404 p., bibliog., index. ISBN 0-7619-2684-4. \$79.95. LC Call no.: RC489.S74H36 2004.

Subjects: Narrative Therapy—Handbooks, Manuals, etc.; Psychotherapy—Handbooks, Manuals, etc.; Psychiatry—Handbooks, Manuals, etc.

Reviewer: Mark Spasser, Chief, Library and Information Services/Associate Professor, Jewish Hospital College of Nursing and Allied Health Library, mas1200@bjc.org

Table of Contents:

Part I. The "Narrative Turn": Why Stories Matter in Psychotherapy

1. The Narrative Creation of Self 3
2. Folk Psychology and Narrative practices 15
3. Narrative Therapy and Postmodernism 53

Part II. Working with Narrative in Psychotherapy

4. The CCRT Approach to Working with Patient Narratives in Psychodynamic Psychotherapy 71
5. "What's the Story?" Working with Narrative in Experiential Psychotherapy 87
6. Nurturing Nature 103
7. Working with Narrative in Psychotherapy 119
8. A Poststructuralist Approach to Narrative Work 137

Part III. Narrative Identity and Self-Multiplicity: Implications for Psychotherapy

9. Narrative Identity and Narrative Therapy 159
10. The Innovation of Self-Narratives 175
11. Assimilation and Narrative 193
12. Minding Our Therapeutic Tales 211

Part IV. Narrative Assessment Strategies in Psychotherapy

13. Self-Defining Memories, Narrative Identity, and Psychotherapy 229
14. The Narrative Assessment Interview 247
15. Disorganized Narratives 263
16. Story Dramaturgy and Personal Conflict 283

Part V. Emerging Trends and Future Directions

17. Narrative Activity 299
18. "To Tell My Story" 315
19. The Contributions of Emotion Processes to Narrative Change I Psychotherapy 331
20. Social Construction, Narrative, and Psychotherapy 351
21. Toward an Integrative Framework for Understanding the Role of Narrative in the Psychotherapy Process 367

Name Index 375
Subject Index 383

The field of narrative-informed therapy (i.e., therapeutic narratology) began nearly a decade ago and has now developed to the point where a comprehensive reference work is both timely and appropriate. **The Handbook of Narrative and Psychotherapy** is the first to bring together clinicians, researchers, and theorists representing a diverse range of approaches, to describe and detail assessment and intervention strategies focusing on client storytelling and narrative ideas in therapy to promote growth and self-integration in clients. The handbook aims to bring together multiple

approaches to narrative traditions so that a more integrated understanding of narrative-informed psychotherapy can be synthesized. The editors have achieved a balance between clinical practice, applied research findings, and theoretical underpinnings.

The handbook is divided into five parts:

Part I includes chapters by such luminaries as Jerome Bruner and David Polkinghorne, who discuss the practical relevance of underlying theoretical issues and debates.

Part II looks at the influence of narrative perspectives as subsets of narrative ideas have been assimilated into such extant therapeutic approaches as psychoanalytic and psychodynamic therapy, experiential approaches, cognitive and constructive therapies, and sociocultural orientations.

Part III demonstrates how adopting a psychotherapy of narrative identity reveals the extent to which the stories that clients tell highlight self-multiplicity.

Part IV deals with defining and observing narratives and self-narration, and their relevance to research, client assessment, and therapist training.

Part V offers proposals for further integrative work in narrative-informed psychotherapy.

Key features include:

- an international “who’s-who” of contributing authors;
- integration of the various approaches and dimensions of narrative therapy, including the contributions of narrative expression to psychotherapeutic practice, theory of the self, and research strategies assessing the contribution of therapeutic narration to client self-change;
- examples of therapy sessions and case materials that demonstrate narrative interventions in action; and
- presentations of clear and consistent professional guidelines in each chapter.

The handbook includes bibliographical references and the end of each chapter, and the volume includes name and subject indexes.

Other books on narrative-influenced psychotherapy include **Healing Plots: The Narrative Basis of Psychotherapy** and **Turns in the Road: Narrative Studies of Lives in Transition**, but neither are comprehensive, state-of-the-art reviews that bring together information on the clinical, research, and theoretical implications of therapeutic narratology.

The **Handbook of Narrative and Psychotherapy** is written for educators and advanced students, psychotherapists, researchers, and theoreticians in social work, counseling, nursing, psychiatry, and clinical psychology. As no other volume brings together original contributions in narrative and psychotherapy from practitioners, researchers, theoreticians from around the world, the **Handbook of Narrative and Psychotherapy** should be purchased by libraries that support the education, practice, and research of professionals in the “helping” sciences.

3491. Handbook of Solution-Focused Therapy, edited by Bill O’Connell, Stephen Palmer. Thousand Oaks, CA, Sage, 2003. 180p., bibliog., index. (Brief Therapies Series). ISBN 0-7619-6783-4, 0-7619-6784-2pbk. \$79.95, \$29.95pbk.

Reviewer: Beth Thomsett-Scott, Science Librarian, University of North Texas Science and Technology Library, bscott@library.unt.edu

Table of Contents:

1. Introduction to the Solution-Focused Approach 1
2. Research in Solution-Focused Brief Therapy 12
3. Solution-Focused Groupwork 25
4. Solution-Focused Practice with Families 38

5.	Solution-Focused Parent Training	48
6.	Solution-Focused Couples Therapy	61
7.	Solution-Focused Therapy and Mental Health	74
8.	The Solution-Focused Approach in Higher Education	84
9.	Solution-Focused Therapy in Schools	95
10.	Solution-Focused Practice in Social Work	106
11.	Using Solution-Focused Therapy with Women	118
12.	A Solution-Focused Approach to Sexual Trauma	129
13.	Solution-focused Therapy and Substance Misuse	138
14.	A Solution-Focused Approach to Pshchosis	146
15.	Solution-Focused Reflecting Teams	156
16.	The Future of SFT	168
Appendix One: Solution-Focused Agencies		173
Index		174

The **Handbook of Solution-Focused Therapy** is another installment of the Brief Therapies Series from Sage Publications. The contributors come from a variety of backgrounds and short, yet informative, biographies are provided. The editors are well recognized in their field.

Chapter One provides a detailed and well-written introduction to and summary of solution-focused therapy. It quickly brings the reader up to speed on the topic without requiring much previous knowledge. Additional chapters contain more specific information as shown in the table of contents list. The chapters are all well-written and highly understandable. References are provided at the end of each chapter and are appropriately current and varied.

Most chapters include "real life" examples to illustrate the main points. In addition, a number of chapters provide case studies to enhance their usefulness.

Frequent use of headings, subheadings, and lists provide for effective location of relevant information. The figures are clearly-labeled and support the text. There is a comprehensive index that contains "see also" references, and includes references to well-known authors cited or mentioned in the field.

The **Handbook of Solution-Focused Therapy** provides an excellent overview of solution-focused therapy, including its development and the state of current research and strategies. Practical examples and case studies enhance the usefulness of the item. It is also well-written and relatively easy to read and understand. This item is highly recommended for practitioners and researchers in field, as well as those interested in the subject. It will be useful for college and academic libraries with relevant programs.

3492. Understanding and Treating Schizophrenia: Contemporary Research, Theory, and Practice, by Glenn D. Shean. New York, NY, Haworth Clinical Practice press/Haworth Press, 2004. 336p., bibliog., index. (Haworth Marriage and the Family). ISBN 0-7890-1887-X, 0-7890-1888-8pbk. \$59.95, \$44.95pbk.
LC Call no.: RC514.S484 2004.

Subjects: Schizophrenia.

Reviewer: Kay Plesca, Consultant, kayp621@aol.com

Table of Contents:

Section I. The development, Evolution, Epidemiology, and Subsyndromes of Schizophrenia		
1.	History of the Concept of Schizophrenia	3
2.	Evolving Diagnostic Criteria	23
3.	Epidemiology, course, and Outcome	39
4.	Language, Thought, and Syndromes of Schizophrenia	57
Section II. Integrative Models and Levels of Analysis		
5.	Vulnerability-Stress Models	79
6.	Epistemology, General Systems Theory, and Schizophrenia	93
Section III. Biological Perspectives		
7.	Genetics and Schizophrenia	101
8.	Neurobiological Models and Research	123

9.	Antipsychotic Medications and neurochemical Theories	139
Section IV. Cognitive-Behavioral, Neurocognitive, and Neuro-Developmental Research		
10.	Neurocognitive and Neurodevelopmental Research	155
11.	Cognitive -Behavioral Approaches and Therapies	165
Section V. Psychodynamic, Phenomenological, and Family-Based Theories		
12.	Psychodynamic Theories	199
13.	Phenomenology and Schizophrenia	233
14.	Schizophrenia and the Family	243
Section VI. Life in the Community		
15.	Schizophrenia and Life in the Community	267
16.	Conclusion	287
References 293		
Index 329		

Understanding and Treating Schizophrenia is a hard cover text addressing what is known and what is not known regarding schizophrenia. The causes have not been defined nor is it known if schizophrenia is a single disorder or is it merely a blanket term for a variety of mental problems. The book presents differing points of view and admits that there are more questions than answers on this complicated subject.

References are provided by chapter at the end of the text and the index is adequate. Each chapter ends with a summary for those who do not require the details of the subject matter or for those who appreciate a consolidated view. There are few tables, charts or diagrams but there are numerous specific cases cited.

Overall, the book is technically written, bringing together information from various studies conducted over the years. They range from Kraepelin at the turn of the century to current research. One needs the vocabulary of the field to understand the implications of the data. There is no glossary for those who need to verify the definitions of words or phrases. This book is definitely written for the professional or the well informed. It is not for the general public or those wishing to acquaint themselves with the subject.

Understanding and Treating Schizophrenia is recommended for mental health facilities and medical libraries. It is useful for the professional seeking composite information on schizophrenia.

Public Health

3493. Encyclopedia of Health and Behavior, edited by Norman B. Anderson. Thousand Oaks, CA, Sage Publications, 2004. 2v., 968p., bibliog., index. (A Sage Reference Publication). ISBN 0-7619-2360-8. \$350.00. LC Call no.: R726.5.E53 2004.

Subjects: Behavioral Medicine—Encyclopedias.

Reviewer: Jitka Hurych, Professor and Head of Science, Engineering and Business Department at Northern Illinois University Founders Memorial Library, jitka@niu.edu

Table of Contents:

Volume 1: A-G

Volume 2: H-W

Appendices:

A. Online Resources and Health and Behavior Organizations 375

B. Bibliography 391

Author Index 913

Subject Index 933

Editor of this monumental two-volume encyclopedia is the Chief Executive Officer and Executive Vice President of American Psychological Association, formerly Professor of Health and Social Behavior at Harvard University. He is also author of several books and recipient of several awards for outstanding contributions to the field.

The book is a result of incredible research efforts of many health science specialists and behavior researchers from major research centers and universities, mostly United States based. These scholars came from many disciplines, such as: psychology, epidemiology, public health, sociology, nursing medicine and anthropology.

It has been recognized that behavioral, psychological, emotional, cultural and biological factor influence physical health outcomes, e.g. heart disease, cancer, arthritis, diabetes and chronic pain. They could however also affect prevention treatment and rehabilitation.

Some of the topics addressed in these volumes are as follows: pain management, cardiac rehabilitation, stress effects on immune system, prevention of HIV/AIDS and socioeconomic status and health. There are over 200 topics organized in alphabetical order and several themes are usually developed in their treatment:

- theories and methods
- biopsychological interactions
- epidemiology of risk and protection factors
- health promotion and disease prevention
- treatment and rehabilitation
- policy and organizational issues

Although health and behavior research has grown dramatically since the early 1980's and many articles and books have appeared since, this is the first comprehensive reference source of this kind.

The usefulness of the encyclopedia is further enhanced by two appendices, one listing online resources and Health and Behavior organizations and the other one including a comprehensive bibliography of books and articles that addresses the issues of link between health, behavior and life style. The encyclopedia covers wealth of information for scholars, practitioners as well as for general public.

Highly recommended for academic, large public and health science libraries.

3494. Encyclopedia of Health Care Management, edited by Michael J. Stahl. Thousand Oaks, CA, Sage Publications, 2004. 621p., bibliog., index. (A Sage Reference Publication). ISBN 0-7619-2674-7. \$150.00. LC Call no.: RA971.E52 2004.

Subjects: Health Services Administration—Encyclopedias; Public Health Administration—Encyclopedias.

Reviewer: Cynthia Burke, Assistant Professor and Librarian, Hampton University School of Nursing, Cynthia.burke@hamptonu.edu

Table of Contents:

Entries A-Z 1

Index 599

Dr. Michael Stahl is a Distinguished Professor of Management at the College of Business, University of Tennessee at Knoxville. He includes over 650 terms in this handy resource. Users have three ways to locate the information. One is the Index. The second is the list of entries at the beginning of the book, with all terms are listed in alphabetical order. The third method is the Reader's Guide, also located at the beginning of the book. All terms are listed in alphabetical order under 16 subject headings. Terms related to international health are also included. International health care policies have influenced and will have an impact on U.S. health education, practice, and research. This reference book includes classic and current terminology and techniques in business, statistics, law, clinical research, and informatics.

The contributors are nurses, physicians, attorneys, business professors, private consultants, and a doctoral student. They work at universities, in hospitals, private industry, and private practice in the United States and abroad. Many of the physicians also have Master of Business Administration (MBA) degrees, enhancing their knowledge of the subject matter from a non-clinical perspective, as well.

Page one of the encyclopedia contains a detailed listing of academic degrees often found in any aspect of health care. They contain designations from the United States and Canada, as well as degrees from the associate to the doctoral and professional levels. The designation with the proper punctuation is included, along with what the designation stands for. The Master of Library Science (M.L.S.) is also included in this list! Health sciences librarians have a significant impact on the clinical and administrative aspects of health care. They are involved in education as instructors on searching and Evidence-Based searching techniques, in research as Principal Investigators and members of Institutional Review Boards, and in patient care as Informationists. Divinity degrees are also included, as chaplains affect the spiritual aspects of health care.

Each entry ranges from ½ page to five pages, with the average length being 2 ½ pages long. Each subject heading is listed in bold capital letters. The subheadings are also in bold print. This makes locating an entry easier. Headings at the top of each page also enable users to easily locate terms in alphabetical order. Each entry contains a basic definition of the term, background information, including subclasses of the term. This encyclopedia includes charts and tables illustrating complex concepts. Current terms defined in this reference work include: bioterrorism, E-health, HIPAA, medical errors, and mentoring. Health care concepts are also included, such as Managing Organizational Change and Job Satisfaction.

One of the terms found in this book is "Evidence-Based Medicine (EBM)." However, it is written by private practice physician. It would have been more beneficial if it could have been written or co-written by a health science librarian. Many health sciences are active in teaching and conducted research using evidence-based techniques. Although the term "Hippocratic Oath" is included in the encyclopedia, the actual oath is not. Portions of the Hippocratic Oath are often quoted in debates about clinical research, conventional and alternative therapies. The text of the Hippocratic Oath and the Nightingale Pledge should be included in future editions of this reference work.

Most entries contain a reference list for those who want to learn more about a subject. The entry dates range from 1984-2002, with the majority being 2001-2002. However, this book has a copyright date of 2004. Websites also listed in the reference list help to maintain the currency of the reference list in and beyond 2004. The references are from publications published in the United States and the United Kingdom. These resources are books, journal articles, government and association reports, and websites. There are also cross-references to related entries.

The **Encyclopedia of Health Care Management** would be useful for those involved in any aspect of health care, whether as a student, instructor, practitioner, researcher, or administrator. This book would be of great use in reference collections at public, university, hospital, and corporate libraries.

3495. Quantitative Methods in Population Health: Extensions of Ordinary Regression, by Mari Palta. New York, NY, Wiley-Interscience, 2003. 311p., bibliog., index. (Wiley Series in Probability and Statistics). ISBN 0-471-45505-9. \$89.95. LC Call no.: RA409.P34 2003.

Subjects: Medical Statistics; Regression Analysis; Population—Health Aspects—Statistical Methods; Health Surveys—Statistical Methods.

Reviewer: Chengzhi Wang, Population Research Librarian, Princeton University Donald E. Stokes Library, chengzhi@princeton.edu

Table of Contents:

1. Review of Ordinary Linear Regression and Its Assumptions 1
2. The Maximum Likelihood Approach to Ordinary Regression 21
3. Reformulating Ordinary Regression Analysis in Matrix Notation 30
4. Variance Matrices and Linear Transformations 38
5. Variance Matrices of Estimators of Regression Coefficients 51
6. Dealing with Unequal Variance Around the Regression Line 62
7. Application of Weighting with probability Sampling and Nonresponse 97
8. Principles in Dealing with Correlated Data 119
9. A Further Study of How the Transformation Works with Correlated Data 145
10. Random Effects 156
11. The Normal Distribution and Likelihood Revisited 181
12. The Generalization to Non-Normal Distributions 190

13.	Modeling Binomial and Binary Outcomes	199
14.	Modeling Poisson Outcomes—The Analysis of Rates	236
15.	Modeling Correlated Outcomes with Generalized Estimating Equations	263
	References	290
	Appendix: Matrix Operations	295
	Index	303

Quantitative Methods in Population Health: Extensions of Ordinary Regression aims at nonstatistician researchers and practitioners of population health, who often deal with existing data sets and work on complex survey designs and longitudinal follow-up. Usually, researchers and practitioners of population health are familiar with ordinary regression analysis, but lack the advanced knowledge and techniques used by professional statisticians. Whereas sophisticated modeling techniques beyond ordinary regression is needed for analyzing complex correlated and longitudinal data and addressing significant issues of population health. Hence, this book timely fills the gap.

The book covers important topics in the field such as regression analysis with weights, unequal variance, correlated and longitudinal outcomes, mixed effects, generalized linear models, and generalized estimating equations. Given the fact that the SAS (Statistical Analysis System) program is one of the most popular statistical tools with researchers and graduate students, the book introduces easy-to-follow methods and techniques to apply the program into the research of population health by using real-life examples. Both theoretical frameworks and practical skills, particularly step-by-step SAS commands, are provided. Most real-life examples come from data sets of three nation renowned Wisconsin surveys. Though other leading national and state demographic health surveys are not introduced and analyzed, the methods and techniques learned from this book are universally applicable in population health research and practice.

The book can be used as both a statistical textbook and a user guide for applying SAS program. It is highly recommended for academic and research libraries supporting programs of demography, public health, and other interdisciplinary programs related to population health.

Science

3496. Tapping State Government Information Sources, by Lori L. Smith, Daniel C. Barkley, Daniel D. Cornwall, Eric W. Johnson, J. Louise Malcomb. Westport, CT, Greenwood Press, 2003. 477p., bibliog., index. ISBN 1-57356-387-0. \$64.00. LC Call no.: Z1223.5.A1T36 2003.

Subjects: State Government Publications—United States—Bibliography; State Governments—United States—Information Resources.

Reviewer: Courtney Greene, Assistant Instruction Coordinator, DePaul University Lincoln Park Campus, cgreene@depaul.edu

Table of Contents:

1.	General Sources Covering all Fifty States	1
2.	State Government Information Sources	15
	Appendix: Quick Reference Guide to Depository Laws and Coordinating Agencies	435
	Index	445

Tapping State Government Information Sources is a clearly organized, thorough guide to state government information resources. For researchers and librarians not specializing in the area, it provides a straightforward approach to locating this type of information, and will serve as a useful quick reference to experts.

The source begins by covering resources applicable to all states, as well as legal information resources, federal information, and topical national reports. For each state, a signed chapter provides background on government publishing and the depository system; information on indexes to state publications; a list of essential state publications; contact information (address, telephone and Web address); related commercial publications, and the sources consulted to compile these lists. An appendix lists depository laws and coordinating agencies for each state for easy referral. The volume closes with a comprehensive index.

The five co-authors are experienced government documents librarians, and in most cases are also directly involved with government information organizations and depository library programs at the state or national level.

A useful addition to most collections, this title is particularly recommended for larger public libraries and academic libraries maintaining business and legal reference collections.

Science—History

3497. Science in the Enlightenment: An Encyclopedia, by William E. Burns. Santa Barbara, CA, ABC-CLIO, 2003, 355p., illus., bibliog., index. (History of Science Series). ISBN 1-57607-886-8. \$85.00. LC Call no.: Q121.B87 2003.

Subjects: Science—History—Encyclopedia

Reviewer: Yolanda Hollingsworth, Electronic Resources Coordinator, University at Albany, State University of New York Science Library, yhollingsworth@uamail.albany.edu

Table of Contents:

Academies and Scientific Societies to Zoology 1
Chronology 305
Bibliography 315
Useful Web Sites 325
Index 327

This encyclopedia is basically a dictionary of eighteenth century Western science. Several sections included were quite informative making a good case for readers to review all the contents of any given book. This was exemplified by the brief descriptions given of both the seventeenth and nineteenth centuries right at the beginning. Within the book's preface, an adequate distinction in all of these periods with respect to science and the "Age of Enlightenment" was provided. This placed a more than adequate background for the facts to come. Those wanting to scan for general subjects covered would find the topic finder section handy. Other helpful sections include a chronology section from 1699 through 1830. Bibliography and index included as well as a list of useful web sites.

The only caution I have with this book is that it is overwhelmingly euro-centric. Perhaps, the author's focus was by design given this period of history that was often told by the Europeans (especially French, English, Dutch and German) who largely consisted of the aristocratic elite. Thus, the culture during this "Period of Enlightenment" was responsible for its own exclusivity in this respect. There is a built in oxymoronic presence with this period of science history so readers need to keep this in mind and not let it distract from the wealth of information being provided.

One might ask how author(s) can manage to create a modern-day encyclopedia focused on an extremely exclusive period of history? Not an easy task supposedly. Although to the book's credit, there is a section on women associated with sexual differentiation and discussed how scientists began to see women not only as inferior representations of men, but also as opposites of men. This ideology helped to foster that belief of women being incapable of rationality...ergo...their inability to become intellectual and scientific. The author indicates that as these theories became more popular, they eventually helped to keep women from participating within the scientific arena. Various women scientists were cited like Maria Winkelmann and Carole Herschel, however, and it was mentioned that despite their proven abilities, there was intentional exclusion of them during this era. Botany was one of the fields of science where women were considered more suited, particularly with the healing powers of plants.

Unfortunately, there is a failure to include, popular or not, the participation of other groups within the eighteenth century. To illustrate, the brief mention of a non-Caucasian is Benjamin Banneker (1731-1806), scientist only as an "intellectual black...American surveyor and astronomer... of mixed race" who went counter to the theories of racial superiority at the time. Banneker, a mathematician and astronomer known for his Almanac, hand-carved wooden clock with exact time for forty years, assisted in the design of the United States Capitol and correspondence with Thomas Jefferson, deserved more recognition as a scientist during this period as well.

Regardless of the opinions readers may have toward the period of Enlightenment with respect to science or its description of it, this encyclopedia has tremendous resource value. It does offer facts and information on many western scientists. The book consists of a whole range of math and science-related areas such as physics, physiology, oceanography, agriculture, geology, embryology, and psychology, to name a few, in the eighteenth century. The author has done well to show that religious (Christian), non-religious (materialism) and other social forces or movements such as Nationalism, "Napoleonic Science" and romanticism have helped shape the direction of science. Moreover, on the converse, the encyclopedia also illustrates how specific events of history were either shaped by as well as having had direct impact on science like the French Revolution. It is recommended for its description of that period. A period in science history that gave birth to the field of engineering along with its close relationship with technology from the highly educated scientist to the uneducated skilled craftsman. This encyclopedia could be used in any library.

Surgery

3498. In a Page Surgery, by Scott Kahan, John J. Raves. Malden, MA, Blackwell, 2004. 206p., index. ISBN 1-4051-0365-5. \$29.95. LC Call no.: RD37.I5 2004. NLM Call no.: WO 39 I35 2004.

Subjects: Surgery—Handbooks, Manuals, etc.; Surgery, Operative—Handbooks, Manuals, etc.; Surgery—Handbooks; Surgical Procedures, Operative—Handbooks.

Reviewer: Teauria Brown, Library Technical Assistant, University of Illinois at Chicago Library of the Health Sciences Chicago, teuria@uic.edu

Table of Contents:

1. Gastrointestinal Disease 2
2. Liver Disease 28
3. Gallbladder Disease 38
4. Pancreatic Disease 46
5. Vascular Disease 52
6. Breast Disease 62
7. Skin Disease 68
8. Hernias 8
9. Trauma 84
10. Head and Neck Disease 98
11. Urology 110
12. Thoracic Surgery 126
13. Cardiac Surgery 138
14. Neurosurgery 148
15. Orthopedic Surgery 160
16. Pediatric Surgery 168

Appendices:

- A. ATLS 180
- B. Principles of Mechanical Ventilation 181
- C. Wound Healing and Care 184
- D. Surgical Drains and Tubes 186

Index 189

This book to is a condensed version of other books on surgery. It uses bullets to make its point. A back page provides the views of other readers. Those who have read this book give it rave reviews, especially medical school students. Unfortunately as a former registered Emergency Medical Technician and a former Medical Assistant who used to work in an urologist office, I find this book of limited use.

Its strong points are that is list 154 different types of surgery with 10 subsections of surgery. It provides the signs and symptoms, origins or cause, diagnosis, diagnostic, treatment, and prognosis.

Since this is a very condensed book, thus the title **In a Page Surgery**, one will not find any lengthy explanations. A glossary would have added to its usefulness.

The book would be useful in a medical school library reference section. Surgeons will probably want a more comprehensive text.

3499. Internist's Illustrated Guide to Gastrointestinal Surgery, edited by George Y. Wu, Khalid Aziz, Giles F. Whalen; foreword by Tadataka Yamada, illustrations by Lily H. Fiduccia. Totowa, NJ, Humana Press, 2003. 341p., illus., bibliog., index. (Clinical Gastroenterology). ISBN 1-58829-023-9. \$99.50. LC Call no.: RD540.I586 2003. NLM Call no.: WI 900 I598 2003.

Subjects: Gastrointestinal System—Surgery; Digestive System Surgical Procedures—Methods.

40 contributors.

Reviewer: Alison Aldrich, Health Sciences Librarian, Fordham Health Sciences Library, Wright State University, Alison.Aldrich@wright.edu

Table of Contents:

Part I. Esophageal Surgery

1. Esophagectomy and Reconstruction 3
2. Zenker's Diverticulum 17
3. Esophagectomy for Achalasia 23
4. Surgery for Gastroesophageal Reflux Disease 33
5. Hiatal Hernia Repair 47
6. Esophageal Stents 57
7. Endoscopic Therapy for Esophageal Varices 65

Part II. Gastric Surgery

8. Surgical Treatment of Peptic Ulcer Disease 75
9. Surgical Management of Gastric Tumors 87
10. Reconstruction after Distal Gastrectomy 99
11. Surgery for Obesity 115
12. Percutaneous Enterostomy Tubes 123

Part III. Small Bowel Surgery

13. Small Bowel Resections 141
14. Urinary Diversion Surgery 151

Part IV. Large Bowel Surgery

15. Colonic Resection 163
16. Surgery of the Rectum and Anus 175

Part V. Hepatic and Billiary Surgery

17. Hepactic Resection 195
18. Bypass and Reconstruction of Bile Ducts 207
19. Cholecystectomy 215

Part VI. Pancreatic Surgery

20. Pancreatic Surgery 227
21. Endoscopic Management of Pancreatic Pseudocysts 249

Part VII. Surgery on Aorta and Its Branches

22. Surgery of the Abdominal Aorta and Branches 261
23. Endovascular Repair of Abdominal Aortic Aneurysm 271

Part VIII. Surgery on Portal Vein

24. Portasystemic Venous Shunt Surgery for Portal Hypertension 283
25. Transjuglar Intrhepatic Portosystemic Shunt 297

Part IX. Abdominal Hernia Surgery

26. Hernia Surgery 311

Part X. Peritoneal Surgery

27. Peritoneal Shunts 323

Index 331

This is one of five books in the **Clinical Gastroenterology** series. George Y. Wu, Chief of the Division of Gastroenterology-Hepatology at the University of Connecticut Health Center, is the series editor. Thirty-eight other physicians and researchers, most from Connecticut, also contributed to this volume.

The unique book is written for primary care providers, family practitioners, gastroenterologists, and others who care for patients who have experienced gastrointestinal surgery. This is *not* a book for

surgeons; it focuses on medical management issues rather than specific details of surgical procedures. The book covers traditional operations as well as the most current laparoscopic procedures. The aim is to educate internists on the advantages and limitations of different approaches to treatment.

Each chapter covers the indications, contraindications, surgical operation, potential complications, and cost of a specific procedure or type of procedure. The format is consistent from chapter to chapter. Headings are logical and easy to scan. References are listed at the end of each chapter.

As per the title, this book is thoroughly illustrated. Most illustrations are simple, black and white line drawings, which are labeled extensively. There are a few black and white radiographs. For more polished illustrations, see **Gastrointestinal Surgery: Pathophysiology and Management** by Haile Debas (Springer-Verlag, 2004).

An Internist's Illustrated Guide to Gastrointestinal Surgery speaks well to its intended audience and is recommended for hospital and academic health science libraries.

3500. Textbook of Peripheral Vascular Interventions, by Richard R. Heuser, Michel Henry. New York, NY, Martin Dunitz/Taylor & Francis, 2004. 555p., illus., bibliog., index. ISBN 1-85317-941-8. \$192.00.

96 contributors.

Reviewer: Joanna Bligh, Associate Executive Editor, Cognimed, jbligh@cognimed.net

1. The Natural History of Peripheral Arterial Disease 1
2. Functional Neuroradiologic and Peripheral Anatomy 5
3. Peripheral Arterial Disease 15
4. Doppler Scanning and Imaging of the Peripheral Vasculature 19
5. The Role of Intravascular Ultrasound in Peripheral Endovascular Interventions 25
6. Endovascular Equipment and Interventional Tools 35
7. The Endovascular Interventional Suite 51
8. Certification and Training in Peripheral Vascular Intervention 57
9. Surgical Alternatives for Peripheral Vascular Diseases 61
10. When to Refer to Surgery 71
11. Techniques of Arterial Access for Endovascular Intervention 79
12. Transbrachial and Transaxillary Approach 87
13. Transradial Approach 93
14. Popliteal Access Site 95
15. Balloon Angioplasty in Peripheral Arteries 101
16. Percutaneous Peripheral Atherectomy Using the Rotablator 107
17. A New Rotational Thrombectomy and Atherectomy Catheter 119
18. Open Subintimal Angioplasty of the Superficial Femoral and Distal Arteries 129
19. Percutaneous Peripheral Atherectomy 135
20. Cutting Balloon Angioplasty in Peripheral Vascular Diseases 149
21. Chronic Total Occlusions 153
22. Thrombolysis in Peripheral Vascular Diseases 163
23. Catheter-Directed Thrombolysis for Lower Extremity Deep Vein Thrombosis 171
24. Drug-Eluting Stents for Peripheral Applications 177
25. PTFE-Covered Stents 181
26. Foreign Body and Stent Retrieval 185
27. Aortoiliac Artery Angioplasty and Stenting 191
28. Iliac Occlusions 201
29. Interventional Strategies for Recanalization of Chronic Total iliac and Femoropopliteal Artery Occlusions 213
30. Procedures for the Hypogastric Artery 231
31. Percutaneous Endovascular Treatment of Femoropopliteal Occlusive Diseases 243
32. Infragenicular Percutaneous Transluminal Angioplasty 263
33. Endovascular Treatment for Lower Extremity Bypass Failure 269
34. Renal Artery Stenosis 277
35. Protected Renal Angioplasty and Stenting with the PercuSurge Device 285
36. Renal Angioplasty and Stenting 293

37. Mesenteric and Celiac Angioplasty and Stenting 305
 38. Percutaneous Transluminal Angioplasty of the Subclavian Arteries 309
 39. Percutaneous Transluminal Angioplasty and Stenting of Extracranial Vertebral Artery Stenosis 323
 40. Carotid Angioplasty and Stenting 333
 41. Carotid Angioplasty Under Cerebral Protection with the PercuSurge Device 341
 42. Clinical Trials in Carotid Angioplasty and Stenting 355
 43. Endovascular Surgery in Multivascular Atherosclerosis 363
 44. Endovascular Treatment of Descending Thoracic Aortic Aneurysms and Dissections 371
 45. Abdominal Aortic Aneurysm 385
 46. Complications of Interventional Treatment of Aortic Aneurysms 393
 47. Percutaneous Endovascular Treatment of Peripheral Aneurysms 401
 48. Endovascular Stent-Grafts for the Treatment of Arterial Disease 413
 49. Interventions in Aortoarteritis 425
 50. Limb Salvage in Critical Limb Ischemia 431
 51. Embolization in Peripheral Territory 447
 52. Hemodialysis Access Intervention 457
 53. Superior and Inferior Vena Cava Interventional Management 469
 54. Restenosis in Peripheal Intervention 475
 55. Radioactive Therapy 485
 56. Gene-Based and Angiogenesis Therapy in Cardiovascular Diseases 493
 57. Management of Lipid Disorders and Other Risk Factors in Patients with Peripheral Vascular Disease 501
 58. Hemostasis and Arterial Closure Devices 513
 59. Our Experience of Endovascular Treatment of Some Congenital Heart Defects 521
 60. Complications of Peripheral Interventions 533
 61. Billing Suggestions for Peripheral Vascular Services 541
- Index 547

The **Textbook of Peripheral Vascular Interventions** is a comprehensive volume explaining all aspects of endovascular techniques, which are treatments for peripheral arterial disease. Technical information in the 61 chapters of this text have been contributed by researchers, cardiologists, radiologists, vascular surgeons, nurses, and other experts in the field from all parts of the globe. This textbook is edited by Dr. Richard R. Hueser, Director of Research of the Phoenix Heart Center in Arizona, and Dr. Michel Henry, interventional cardiologist in Nancy, France. Both have contributed significantly to many of the chapters in this textbook.

Peripheral arterial disease (PAD) is prevalent in the aging US population with over 60, 000 hospitalizations annually. Additionally, approximately 50% of patients with disease in the peripheral vessels have no painful symptoms. This textbook leads the way in demonstrating the need to inform clinicians and medical providers of the necessity of screening and treating PVD.

Using photos of angiographic studies, Chapter 2 illustrates normal carotid, abdominal, pelvic, and lower extremity imaging. Chapter 3 discusses the identification of patients with PAD, the guidelines for clinical evaluation, the non-interventional therapies, such as exercise therapy, risk modification (smoking cessation), antiplatelet therapy, and the use of pharmacologic agents. Diagnostic imaging techniques are discussed in Chapter 4, which is illustrated by nicely reproduced Doppler ultrasound images. Interventional techniques are discussed in the subsequent Chapters 5-8 and describe the mechanical devices used, training and certification that are necessary, and a description of the interventional suite and personnel required. Surgical revascularization techniques, angioplasty and stenting techniques in the major arteries and veins of the body, as well as radioactive therapy are discussed in the remaining chapters of this textbook. The textbook also covers broad areas of interest in the office management of interventional services. For example, chapter 57 presents the management of lipid disorders as preventative medicine. Chapter 60 introduces the management of complications resulting from interventional techniques, And, Chapter 61 addresses billing issues for payment, coding, and reimbursement of interventional services.

The **Textbook of Peripheral Vascular Interventions** is highly illustrated and includes excellent black and white photographic reproductions of ultrasound imaging, angiograms, and interventional devices and tools, as well as line drawings of surgical techniques. The textbook is extremely well referenced with a complete bibliography at the end of each chapter. Additionally, within each chapter

throughout the textbook, points of discussion are verified through the reporting of clinical trials relating to each topic. In general, the **Textbook of Peripheral Vascular Interventions** is a comprehensive, essential, well-illustrated book of archival quality on the interventional techniques related to PVD.

I would highly recommend this textbook as a reference book for medical schools, hospital and clinical interventional suites, and health science libraries.

3501. Transplant: From Myth to Reality, by Nicholas L. Tilney. New Haven, CT, Yale University Press, 2003. 320p., illus., bibliog., index. ISBN 0-300-09963-0. \$30.00. LC Call no.: RD120.6.T54 2003. NLM Call no.: WO 11.1 T579b 2003.

Subjects: Transplantation of Organs, Tissues, etc.—History; Organ Transplantation—History; Transplantation—History.

Reviewer: Robert B. Ridinger, Chair, Electronic Information Resources Management, Northern Illinois University Founders Memorial Library, rridinger@niu.edu

Table of Contents:

1.	Legends, Possibilities, and Disasters	1
2.	Attempts and Failures	36
3.	Hopes and Occasional Successes	60
4.	Host Defenses and Immunity	83
5.	Peter Medawar and Transplantation Biology	109
6.	Innovation and the Struggle for Legitimacy	125
7.	Prolongation of Life and of Death	143
8.	New Departures	164
9.	The Dracula of Modern Technology	187
10.	The Abdominal Viscera	199
11.	A Modern Minotaur	217
12.	Coming of Age	229
13.	The Industrialization of Transplantation	244
14.	Unexpected Specters	257
15.	Future Prospects	276
	Time Line	285
	Notes	289
	Index	313

Written by the director of the Surgical Research Laboratory at Harvard Medical School, this is a surprising readable history of the intertwined subjects of organ transplantation and transplantation biology, together with their social and often political impacts across the centuries. Beginning with the appearance in mythology of such hybrid creatures as the chimera, the Minotaur and the centaur (all combinations of human and animal bodies and limbs), proposed and practical techniques for the restoration of physical features such as the nose are reviewed, the earliest known being an Indian text ca. 1000 B.C. in date. The second chapter, " Attempts and Failures ", reviews the first Western clinical history of the concept, from the work in the 1890's on the reattachment of severed veins and arteries through the first attempts at kidney transplants, with an interesting section of the early work on possible limb replacement based on work done on dogs. The first successful kidney transplant in 1954 between identical twins and the gradual expansion of this procedure beyond genetically identical individuals, the successful utilization of total- body radiation treatments to prevent rejection, and a recognition of the need for chemical suppressants to obviate the dangers of radiation therapy are covered in the third chapter. The problem of infections as a consequence of transplantation and the cell mechanics of rejection (first noted in the study of cancer tumors) and the analysis of lymphocytes and other aspects of the body's immune system active in transplant rejections brings the discussion to the expansion of transplantation biology from a relatively obscure field at the midpoint of the twentieth century to the dynamic contemporary field. The pioneering work of Peter Medawar in England is examined in detail, as is the history of the use of experimental animals in biology and popular opposition to it, which began as a part of the movement against cruelty to animals begun in eighteenth and nineteenth century England and expanded in the Victorian era into an international anti-vivisections crusade. The author notes improvement in the care and treatment of experimental animals, while admitting that " not until 1966 were minimal standards formulated in the United States

" (p.124) and regarding progress in medical biology without the use of animal subjects as highly unlikely. The contributions made during the 1960s and early 1970s by the creative interplay of laboratory progress in transplantation biology and new and daring applications of its results in patient care is profiled in the sixth chapter " Innovation and the Struggle for Legitimacy ". Chapters seven through ten review the support of patients with organ failure by mechanical means (the costly example cited being kidney dialysis), the impact of life support technology on the clinical definition of death, the rise of the idea of organ donation, and the expansion of the idea of transplantation from kidneys (the initial organ of surgical interest) to other body parts such as the liver and heart and the development of the artificial heart. Topics addressed in the remaining chapters are the history of attempts to use animal organs as replacements in humans (technically termed xenotransplantation), the " coming of age " of transplantation as a viable therapeutic option available to many patients under government funded healthcare systems (helped greatly by the creation of effective immunosuppressive drug such as cyclosporin and its successors) and the " industrialization " of transplants via the growth and expansion of pharmaceuticals and the ensuing altered relationship between industry and academic research. The inevitable question of how to cope with what Tilney terms "the divergence between the ever-increasing numbers of potential recipients and the consistently inadequate organs becoming available" (p.257) and its ethical implications involving the sale of human organs obtained under exploitative circumstances completes the text. Two separate timelines marking the major dates of significant accomplishments in organ transplantation (beginning in 1900) and transplantation biology (from 1907) are appended. A deft and thoughtful treatment of a topic whose complex history is often difficult for non-specialists to comprehend. Most suitable for large science collections of large public libraries, college and university undergraduate libraries, medical libraries supporting both general practitioner certification and specialist training in surgery, hospital libraries, and history of medicine special collections.

Veterinary Science—Prions

3502. Prions and Mad Cow Disease edited by Brian K. Nunnally, Ira S. Krull. New York, NY, Marcel Dekker, 2004. 428p., illus., bibliog., index. ISBN 0-8247-4083-1. \$175.00. LC Call no.: SF967.S63P958 2004.

Subjects: Prion Diseases; Prions; Bovine Spongiform Encephalopathy,

36 contributors.

Reviewer: Beth Thomsett-Scott, Science Librarian, University of North Texas Science and Technology Library, bscott@library.unt.edu

Table of Contents:

1. Taking Aim at the Transmissible Spongiform Encephalopathies Infectious Agents 1
2. Prions, the Protein Hypothesis, and Scientific Revolutions 21
3. A Simulation Model for Evaluating the Potential for Spread of Bovine Spongiform Encephalopathy in Animals or to People 61
4. Actions to Prevent Bovine Spongiform Encephalopathy from Entering the United States 125
5. Overview of Transmissible Spongiform Encephalopathy in Cervids in the United States 137
6. Bioassays for Prions 151
7. Cyclic Amplification of Scrapie Prion Protein 181
8. The Enfer Transmissible Spongiform Encephalopathies Assay 199
9. Sensitive Detection of Prion Proteins by Immunoassay 247
10. The Diagnosis of Transmissible Spongiform Encephalopathies Using Differential Extraction and DELFIA 277
11. In Vivo Diagnosis of Prion Diseases 317
12. Diagnosis of Prion Diseases by Multispectral Techniques 333
13. Detection of the Prion Protein in Blood Using a Fluorescence Immunoassay 359
14. Prion Detection and Application to the Safety of Biological Products 379

Index 413

Prions and Mad Cow Disease provides a comprehensive, well-written and extensively researched overview of the current state of research into prion diseases. The editors also hope that the item will stimulate scientific thinking on this topic. While the focus of the book is to present various approaches

of diagnosing prion diseases, the detailed forward and the first five chapters provide an introduction to and overview of prion diseases including possible effects on humans and epidemiological issues.

Contributors are located in a variety of countries to provide a global perspective on the issues and research. Contact information is also provided. Chapters are exhaustively researched as evidenced by the high number of references included. References are appropriately current and come from a variety of sources, including online sources.

The numerous tables and figures are clearly labeled and effectively support the text. There is a detailed index, which contains “see” and “see also” references. The text is well-written and understandable. The print is dark and shows up well on the pages.

Prions and Mad Cow Disease is highly recommended for college, university and special libraries with relevant areas of research. Public libraries will find it of less use due to the need for some biological knowledge for the latter chapters; however, the first few chapters do provide substantial information in an easy to read manner.

Birds—Zoology—Birds

3503. Birds of Northern India, by Richard Grimmett, Tim Inskipp, illustrated by Clive Byers, Daniel Cole, John Cox, Gerald Driessens, Carl D'Silva, Martin Elliott, Kim Franklin, Alan Harris, Peter Hayman, Craig Robson, Jan Wilczur, Tim Worfolk. Princeton, NJ, Princeton University Press, 2003. 304p., color illus., bibliog., index. (Princeton Field Guides). ISBN 0-691-11738-1. \$29.95. LC call no.: QL691.I4G75 2003.

Subjects: Birds—India—Identification.

Reviewer: Diane C. Schmidt, Biology Librarian, University of Illinois at Urbana-Champaign Biology Library, dcschmid@ux1.cso.uiuc.edu

Table of Contents:

Introduction 9
National Organisations 22
International Organisations 24
References 25
Glossary 27
Selected Bibliography 29
Family Summaries 32
Colour Plates and Species Accounts 46
Appendix 284
Tables 291
Index 299

This attractive field guide, originally published by Christopher Helm in the UK, covers all 812 species of birds commonly found in northern India. This includes the states of Jammu and Kashmir, Himachal Pradesh, Uttaranchal, Uttar Pradesh, Madhya Pradesh, Haryana, Punjab, Rajashtan and Gujarat, and the Union Territory of Delhi. This region of India is at the confluence of the Oriental, Palearctic, and African biogeographical regions, so the birds are an interesting blend of the familiar (common starling) and the exotic (Malabar Pied Hornbill). The introduction provides information on the habitats of the region, endangered and threatened species, several of the best birding areas in the region, and a list of national and international birdwatching organizations. There is also a glossary and bibliography, and an appendix lists 94 vagrants.

The descriptions and illustrations of the birds were taken from the authors' hefty 900 page field guide **Birds of the Indian Subcontinent** with the addition of several new plates featuring regional sub-species. As with most modern field guides, the brief descriptions face the plates. There are no distribution maps, but each description includes a list of states in which the bird is found. The descriptions also include information on the habitat, altitude found, status, and sometimes voice. Common names are given in English only. An illustrated list of bird family summaries provides a handy shortcut and index to help guide birders to the right section of the book, and there are tables comparing difficult groups such as nightjars and several different groups of warblers.

The field guide is very attractive. The authors have written several other field guides to the birds of the Indian region, and the illustrators are among the best in the field guide business. At its modest price, this is an excellent purchase for large public and academic libraries where there is an interest in birds, the Indian subcontinent, and/or armchair ecotravelling.

Zoology—Vertebrate—Reptiles

3504. Reptiles of Australia, by Steve Wilson, Gerry Swan. Princeton, NJ, Princeton University Press, 2003. 480p., color illus., bibliog., index. (Princeton Field Guides). ISBN 0-691-11728-4. \$29.95. LC Call no.: QL663.W57 2003.

Subjects: Reptiles—Australia.

Reviewer: Catherine Outten, Consultant, ca_outten@yahoo.com

Table of Contents:

How to Use This Book	5
Glossary and Illustrations	8
Introduction	14
Crocodiles	20
Hard-Shelled Sea Turtles	22
Leathery Sea Turtle	28
Side-Necked Freshwater Turtles	30
Pig-Nosed Turtle	46
Geckos	48
Flap-Footed Lizards	102
Skinks	124
Dragons	298
Monitors and Goannas	336
Blind Snakes	350
Pythons	368
File Snakes	380
Colubrid Snakes	382
Venomous Land Snakes	392
Sea Snakes	448
Sea Kraits	466
Appendix	468
Selected Reading	470
Index	472

Reptiles of Australia is a comprehensive field guide or checklist, but also a simple introduction to species description and a beautiful collection of photographs of Australian reptiles. It includes all species described through 2002.

Gerry Swan is no stranger to herpetology of Australia with previous publications including **Snakes & Other Reptiles: Of Australia** and **Frogs of Australia** (both Green Guides) (New Holland/Struik 2001) and **A Photographic Guide to the Snakes and other Reptiles of Australia**. Chelsea Green 1998). The photographs mostly by Steve Wilson round out this eye-catching book.

With a "how to use this book section", including simple descriptions of each part of the species entries, as well as an abbreviation guide, a glossary, and illustrations showing characteristics used to describe the species, this book is very user-friendly. First time users of field guides will be able to find their way around.

Organized by family, each section starts with a narrative describing the reptile family and traits common to members of the group. Within the family sections, species are grouped by genus and are described for identification, usually 4-6 to a page. Each species is accompanied by a photograph of a typical specimen. The entries include a small map showing generally where the species is found in Australia. Descriptions include notes on typical habitats the species will be found in and some include the conservation status of the species. For similar species there are *see also* references in order to aid identification.

Reptiles of Australia includes a "Selected Reading" bibliography with recommended as well as the more recent information sources the authors consulted. It also includes an index of all species names, as well as common names of large groups (i.e. turtle, gecko, snake) subdivided by common names of individual species.

Reptiles of Australia is a simple, concise guide to a vast number of species of Australian reptiles. For herpetologists and those just interested in these fascinating creatures, this book is a must for travel to Australia. Its bright and colorful pages will attract even the reader with minimal interest in the subject. This book is recommended for all academic libraries with zoology or natural history collections as well as large public libraries with a science-minded clientele.

Comments may be sent to the Editor at hrm@uic.edu. Any readers who are also publishers of STM-related material and would like it considered for review, can submit items to H. Robert Malinowsky, ESTREAMS, c/o University of Illinois at Chicago Library, 801 S. Morgan, Chicago, IL 60607-7041.

Publisher: YBP Library Services
Editor: H. Robert Malinowsky, University of Illinois at Chicago
Layout & Design: Jackie Wilson, Bill Shaw
Editorial Offices: PO Box 8198 M/C 234, Chicago, IL 60680; hrm@uic.edu.

E-STREAMS is free of charge and is available only in electronic form. Opinions expressed in the reviews are those of the editor or reviewers. There are two listservs available; the first is a text-based email, alerting subscribers when the current issue is live on the Web and listing the TOC with title-specific hyperlinks to the web-based reviews; the second is an email with an attached PDF file of the current issue. To subscribe or unsubscribe to the text-only listserv, please send a blank message to e-txt-request@lists.obs-us.com with "subscribe" (or "unsubscribe") in the subject line. To subscribe or unsubscribe to the .pdf listserv, please send a blank message to e-pdf-request@lists.obs-us.com with "subscribe" (or "unsubscribe") in the subject line.

All materials in the journal are subject to copyright by YBP Library Services and may be reprinted or redistributed for the non-commercial purpose of scientific or educational advancement granted by Sections 107 and 108 of the Copyright Revision Act of 1976. For other reprinting, redistribution, or translation, send requests to Dawn Johnson at djohnson@ybp.com.

E-STREAMS © 2001 YBP Library Services, A Baker & Taylor Company
999 Maple Street, Contoocook, New Hampshire 03229 U.S.A.
(603) 746-3102 • Fax (603) 746-5628
Email: estreams@ybp.com & hrm@uic.edu • [ww](http://www)