

## THE LONG-TERM ECOLOGICAL NETWORK SERIES

### Principles and Standards for Measuring Primary Production

Edited by **Timothy J. Fahey**, Cornell University, USA, and **Alan K. Knapp**, Kansas State University, USA



This volume describes the best methods for measuring net primary productivity (NPP) in ecological research.

Primary productivity is the rate at which energy is stored in the organic matter of plants per unit area of the earth's surface. NPP is the beginning point of the carbon cycle, so our ability to accurately measure NPP is important.

The book includes chapters for each of the critical biome types to offer special techniques that work best in each biome. For example, there are chapters that discuss grassland ecosystems, urban ecosystems, marine pelagic ecosystems, forest ecosystems, and salt marsh ecosystems, among others.

2007 | 280 pages

978-0-19-516866-2, HARDBACK £35.99/\$59.50



### NEW FOR 2008

### Ecology of the Shortgrass Steppe

*A Long-Term Perspective*

**W. K. Lauenroth** and **I. C. Burke**, both at Colorado State University, USA

The semiarid shortgrass steppe is the warmest, driest, and lowest in primary production of grasslands in central North America. This book is an enormously rich source of data and insight into the structure and function of semiarid grassland.

November 2008 | 512 pages

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### NEW FOR 2008

### Agrarian Landscapes in Transition

*Comparisons of Long-Term Ecological & Cultural Change*

**Charles Redman**, Arizona State University, USA, and **David R. Foster**, Harvard University, USA

Agrarian transformations represent the most pervasive alteration of the Earth's terrestrial environment over the past 10,000 years. Using North American examples, the book traces, compares, and contrasts the introduction, spread, and abandonment of agriculture at six U.S. long-term ecological research (LTER) sites. Indeed, lessons from these examples apply more broadly to inform socio-ecological studies, land use options, conservation strategies, restoration initiatives, and urban planning.

September 2008 | 288 pages

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### NEW FOR 2008

### Sustaining Life

*How Human Health Depends on Biodiversity*

Edited by **Eric Chivian** and **Aaron Bernstein**, Both at Harvard Medical School, USA

'*Sustaining Life* is the most complete and powerful argument I have seen for the importance of preserving biodiversity.'

**Al Gore**, former Vice President, 2007 Nobel Peace Prize Laureate

*Sustaining Life* presents a comprehensive—and sobering—view of how human medicines, biomedical research, the emergence and spread of infectious diseases, and the production of food, both on land and in the oceans, depend on the earth's disappearing biodiversity. With a foreword by E.O. Wilson and a prologue by Kofi Annan, and more than 200 poignant colour illustrations, *Sustaining Life* contributes essential perspective to the debate over how humans affect biodiversity and a compelling demonstration of the human health costs.

May 2008 | 528 pages

978-0-19-517509-7, HARDBACK

£18.99/\$34.95



### NEW FOR 2009

### Big Questions in Ecology and Evolution

**Thomas N. Sherratt**, Carleton University, Canada, and **David M. Wilkinson**, John Moores University, UK

This book provides an introduction to a range of fundamental questions that have taxed evolutionary biologists and ecologists for decades. All of the questions posed have at least a partial solution, all have seen exciting breakthroughs in recent years, yet many of the explanations have been hotly debated.

February 2009 | 336 pages

978-0-19-954861-3, PAPERBACK

£27.50/\$55.00

978-0-19-954860-6, HARDBACK

£55.00/\$110.00



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### NEW FOR 2008

### Dispersal in Plants

*A Population Perspective*



**Roger Cousens**, University of Melbourne, Australia, **Calvin Dytham**, University of York, UK and University of Potsdam, Germany, and **Richard Law**, University of York, UK

This book is the first text in many years to comprehensively describe our state of knowledge of dispersal in plants. It brings

together information from ecological field studies and theoretical modelling, exploring the implications of one for the other. It begins with the adaptations and dispersal of individual seeds, but then, unlike previous books, goes on to examine this in the context of entire plant populations and evolution. It therefore fills a significant gap on the bookshelf of both research ecologists and those involved actively in managing vegetation. The authors draw on a wealth of experience in the study of both natural vegetation and agricultural systems, from field ecology to theoretical modelling and in northern and southern hemispheres.

March 2008 | 240 pages

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£34.95/\$70.00

978-0-19-929911-9, HARDBACK

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### NEW FOR 2008

### Allee Effects in Ecology and Conservation



**Franck Courchamp**, Univ Paris Sud, France, **Ludek Bercé**, Biology Centre of the Academy of Sciences of the Czech Republic, České Budejovice, Czech Republic, and **Joanna Gascoigne**, University of Wales at Bangor, UK

'This is an excellent book that provides a comprehensive exploration of both the causes and consequences of Allee effects.'

*Trends in Ecology and Evolution*

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### NEW FOR 2009

### Ecology and Evolution of the Grass-endophyte Symbiosis

**Gregory P. Cheplick**, CUNY/Staten Island, and **Stanley Feath**, Arizona State University, USA

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£37.50/\$74.50

NEW FOR 2009

**Biodiversity and Human Impacts***Ecological and Social Implications*

Edited by **Shahid Naeem** and **Daniel E. Bunker**, both at Columbia University, USA, **Andrew Hector**, University of Zurich, Switzerland, **Michael Loreau**, McGill University, Canada, and **Charles Perrings**, Arizona State University, USA

Biodiversity change is one of the most controversial and high profile areas of ecological research. This book provides an in-depth evaluation of the science and its implications and applications to some of the most pressing environmental issues facing humans today.

June 2009 | 320 pages

978-0-19-954796-8, PAPERBACK  
978-0-19-954795-1, HARDBACK

£34.95/\$69.90  
£70.00/\$140.00

**An Introduction to Ecological Genomics**

**Nico M van Straalen** and **Dick Roelofs**, both at the Vrije Universiteit, Amsterdam, The Netherlands

'In many respects this is a textbook for a discipline that is yet to develop. It should bring home to ecologists, however, that the study of genomes has immediate relevance to our field, and it illustrates the ways in which this advancing science can contribute to the work and the questions that already engage ecologists.'

*Bulletin of the British Ecological Society*

2006 | 320 pages

978-0-19-856671-7, PAPERBACK £39.95/\$65.00  
978-0-19-856670-0, HARDBACK £80.00/\$150.00

**Island Biogeography***Ecology, Evolution, and Conservation*

SECOND EDITION

**Robert J. Whittaker**, Oxford University Centre for the Environment, UK, and **Jose Maria Fernandez-Palacios**, Universidad de La Laguna, Spain

A definitive review of the island literature, explaining how islands have been used as natural laboratories in developing and testing ecological and evolutionary theories.

2006 | 416 pages

978-0-19-856612-0, PAPERBACK £37.50/\$65.00  
978-0-19-856611-3, HARDBACK £75.00/\$140.00

NEW FOR 2009

**Wytham Woods***Oxford's Ecological Laboratory*

Edited by **Christopher Perrins** and **Peter Savill**, both at the University of Oxford, UK

This iconic location has been the subject of a very long-term ecological research programme dating back to the 1920s. The book will provide an overview of the Woods—their history, composition (both plant and animal), how their wildlife has changed over time, and their significance in terms of the scientific research that has been conducted there.

June 2009 | 256 pages

978-0-19-954320-5, HARDBACK

£49.95/\$99.90

**Disease Ecology***Community structure and pathogen dynamics*

Edited by **Sharon K. Collinge**, and **Chris Ray**, both at the University of Colorado, USA

'For those less familiar with infectious diseases the book provides fascinating insights into their ecological context...we would recommend it to any ecology student.'

*The Times Higher Education Supplement*

2006 | 240 pages

978-0-19-856708-0, PAPERBACK £39.95/\$59.50  
978-0-19-856707-3, HARDBACK £80.00/\$124.50



Nominated for THES Young Author of the Year Award 2006

**Discovering Evolutionary Ecology***Bringing together ecology and evolution*

**Peter J. Mayhew**, Lecturer in Ecology, University of York, UK

'This is a book useful for a broad audience, from the undergraduate student to the professional scientist, and its simple, clear and very pleasant style makes it accessible and appealing to the non-biologist reader.'

*Vie et Milieu*

'...readable and well-illustrated with relevant and easy-to-understand graphs, line drawings and tables. Undergraduates will love it.'

*The Times Higher Education Supplement*

2006 | 232 pages

978-0-19-852528-8, PAPERBACK £29.95/\$49.50  
978-0-19-857060-8, HARDBACK £65.00/\$112.50

**Ecological Networks***Linking Structure to Dynamics in Food Webs*

Edited by **Mercedes Pascual**, University of Michigan, USA, and **Jennifer A. Dunne**, Santa Fe Institute, New Mexico, USA

Santa Fe Institute Studies on the Sciences of Complexity

2006 | 404 pages

978-0-19-518816-5, HARDBACK £37.99/\$70.95

**Theoretical Ecology***Principles and Applications*

THIRD EDITION

Edited by **Robert May** and **Angela R. McLean**, both at the University of Oxford, UK

'I would recommend this book to those seeking an overview of modern theoretical ecology and those seeking an easy access point to any one of the main topics covered.'

*Bulletin of the British Ecological Society*

'... a must for every ecologist's library.'

*Science*

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978-0-19-920999-6, PAPERBACK £32.50/\$45.00  
978-0-19-920998-9, HARDBACK £65.00/\$120.00

NEW FOR 2008

**Foundations of Environmental Sustainability***The Coevolution of Science and Policy*

Edited by **Larry L. Rockwood**, **Ronald E. Stewart**, both at George Mason, University, USA and **Thomas Dietz**

The purpose of this book is to review and analyze the period in the last half century when 'the environment' became an issue as important as economic growth to many people; to assess the current situation and begin planning for the challenges that lie ahead. The authors are a distinguished group of individuals who have played important roles in conservation and the development of environmental policy throughout much of the world.

July 2008 | 496 pages

978-0-19-530945-4, HARDBACK ££44.95/\$89.95

## NEW FOR 2009

**Invasion Biology**

Mark A. Davis, Macalester College, Saint Paul, MN, USA

This is an up-to-date overview of the field of invasion biology, which includes an overview of the science, the impacts, and management of invasive species, as well as a critical assessment of the field itself.

January 2009 | 288 pages

978-0-19-921876-9, PAPERBACK £32.50/\$72.00  
978-0-19-921875-2, HARDBACK £65.00/\$130.00

## NEW FOR 2009

**Astrobiology of Planet Earth**

*The emergence, evolution and future of life on a small world*

Joseph Gale, Hebrew University of Jerusalem, Israel

This book introduces the extraordinary and fortuitous coincidence of numerous factors of our galaxy, Solar System and Planet Earth which enabled the appearance of, and continue to affect the evolution of life—an ongoing, dynamic and non equilibrium process.

March 2009 | 224 pages

978-0-19-920581-3, PAPERBACK £24.95/\$49.90  
978-0-19-920580-6, HARDBACK £55.00/\$110.00



Winner of The BES Ecology Book of the Year Award 2007

**Fundamental Processes in Ecology**

*An earth systems approach*



David M Wilkinson,  
Liverpool John Moores  
University, UK

2007 | 200 pages

978-0-19-922906-2, PAPERBACK £27.50/\$54.95  
978-0-19-856846-9, HARDBACK £39.95/\$99.00

## NEW FOR 2008

**Environmental Change and Globalization**

*Double Exposures*

Robin Leichenko, Rutgers University, USA, and Karen O'Brien, University of Oslo, Norway

*Environmental Change and Globalization: Double Exposures* explores the connections between two of the most transformative processes of the twenty-first century: global environmental change and globalization. In the book, Leichenko and O'Brien present a conceptual framework for analyzing the interactions between these two processes, and they illustrate, through case studies, how these interactions create situations of 'double exposure.'

October 2008 | 192 pages

978-0-19-517732-9, PAPERBACK £15.99/\$29.95  
978-0-19-517731-2, HARDBACK £41.00/\$74.00

## NEW FOR 2008

**Climate Variability and the Global Harvest**

*Impacts of El Niño and Other Oscillations on Agro-Ecosystems*

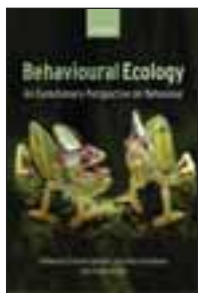
Cynthia Rosenzweig, Goddard Institute for Space Studies, USA, and Daniel Hillel, Columbia University, USA

*Climate Variability and the Global Harvest* provides a comprehensive coverage of the interactions between the major climate oscillations—especially the El Niño-Southern Oscillation—and climate change, and agriculture. It describes climate system processes, effects of the major oscillations on natural and agro-systems, methods and models used to study these interactions, the development and use of seasonal climate predictions, and the relation of climate variability to society and sustainable development.

January 2008 | 224 pages

978-0-19-513763-7, HARDBACK £38.99/\$65.00

## NEW FOR 2008

**Behavioural Ecology**

Edited by Étienne Danchin, Université Paul Sabatier, Toulouse, France, Luc-Alain Giraldeau, Université du Québec à Montréal, Québec, Canada, and Frank Cézilly, Université de Bourgogne, France

*Behavioural Ecology* gives a fresh, contemporary account of the evolutionary and ecological processes that

underpin animal behaviour. Contributions from subject experts and meticulous editing yield a text with all the qualities of a multi-author book, but without the potential drawbacks.

February 2008 | 912 pages

978-0-19-920629-2, PAPERBACK £29.99/\$69.95

**Energy... beyond oil**

Fraser Armstrong and Katherine Blundell, both at the University of Oxford, UK

'I know more about *Energy...Beyond Oil* because of this book. When questions occur, I know where to look for answers. This book provides a comprehensive non-technical snapshot of the current situation in energy research, and will be particularly useful for researchers and policy-makers wishing to update their knowledge of the status of these technologies.'

Physics World

2007 | 240 pages

978-0-19-920996-5, HARDBACK £25.00/\$49.50

**An Introduction to Molecular Ecology**

SECOND EDITION

Trevor Beebee, University of Sussex, UK, and Graham Rowe, University of Derby, UK

*An Introduction to Molecular Ecology* introduces the latest molecular concepts and techniques, demonstrating how genetic markers and molecular tools can be used to answer ecological questions such as 'How do we know whether a particular species is monogamous or promiscuous?'; 'How can we monitor the illegal trafficking of wildlife?'; and 'How can we differentiate between the many similar species making up a microbial community?' Such questions, whose answers were previously out of our reach, can now be probed, revolutionizing our understanding of ecological systems and phenomena.

2007 | 416 pages

978-0-19-929205-9, PAPERBACK £27.99/\$49.95

## NEW FOR 2008

**Radiological Risk Assessment and Environment Analysis**

Edited by John E. Till, Radiological Assessments Corporation, USA

A comprehensive book that explains methods used for estimating risk to people exposed to radioactive materials released to the environment by nuclear facilities or in an emergency such as a nuclear terrorist event.

August 2008 | 640 pages

978-0-19-512727-0, HARDBACK £68.00/\$125.00

