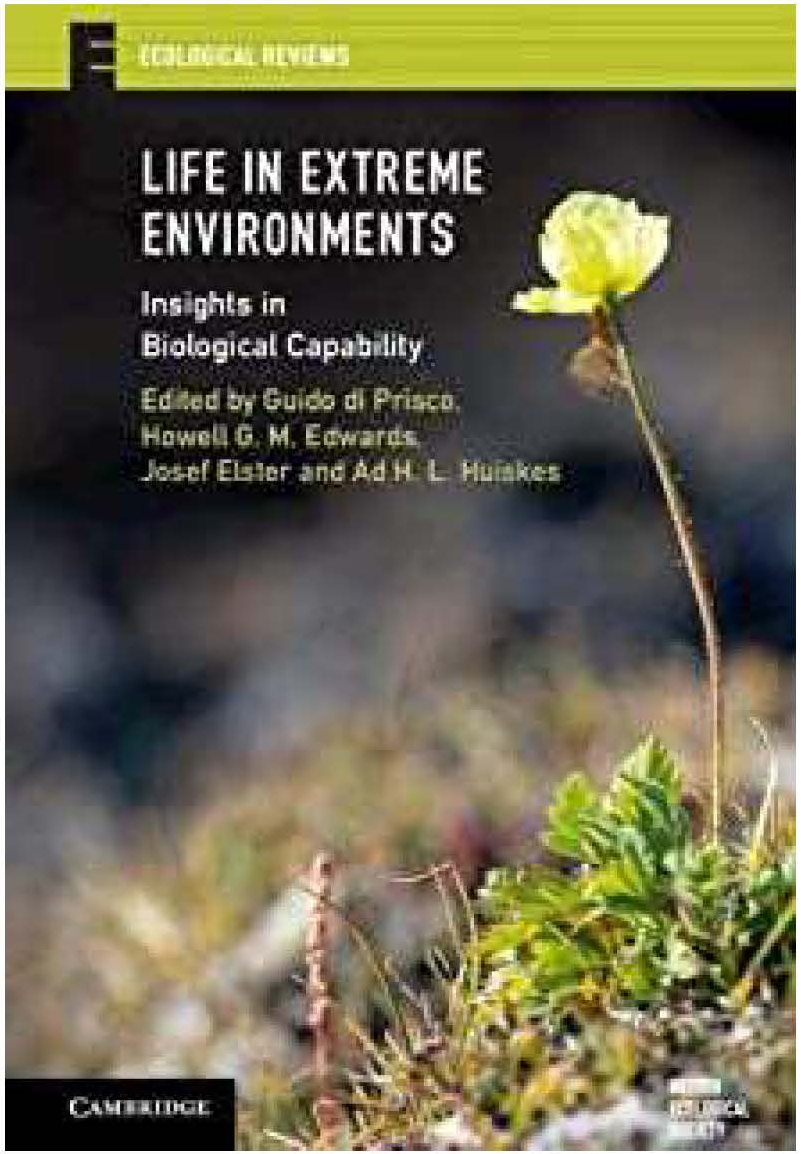

Life in Extreme Environments

Insights in Biological Capability

EDITORS:
Guido di Prisco, National Research Council of Italy
Howell G. M. Edwards, University of Bradford
Josef Elster, University of South Bohemia, Czech Republic

PUBLISHER: Cambridge University Press
DATE PUBLISHED: November 2020
FORMAT: Paperback
ISBN: 9781108724203
PRICE: $ 49.99 DL

From deep ocean trenches and the geographical poles to outer space, organisms can be found living in remarkably extreme conditions. This book provides a captivating account of these systems and their extraordinary inhabitants, 'extremophiles'. A diverse, multidisciplinary group of experts discuss responses and adaptations to change; biodiversity, bioenergetic processes, and biotic and abiotic interactions; polar environments; and life and habitability, including searching for biosignatures in the extraterrestrial environment. The editors emphasize that understanding these systems is important for increasing our knowledge and utilizing their potential, but this remains an understudied area. Given the threat to these environments and their biota caused by climate change and human impact, this timely book also addresses the urgency to document these systems. It will help graduate students and researchers in conservation, marine biology, evolutionary biology, environmental change and astrobiology better understand how life exists in these environments and their susceptibility or resilience to change.

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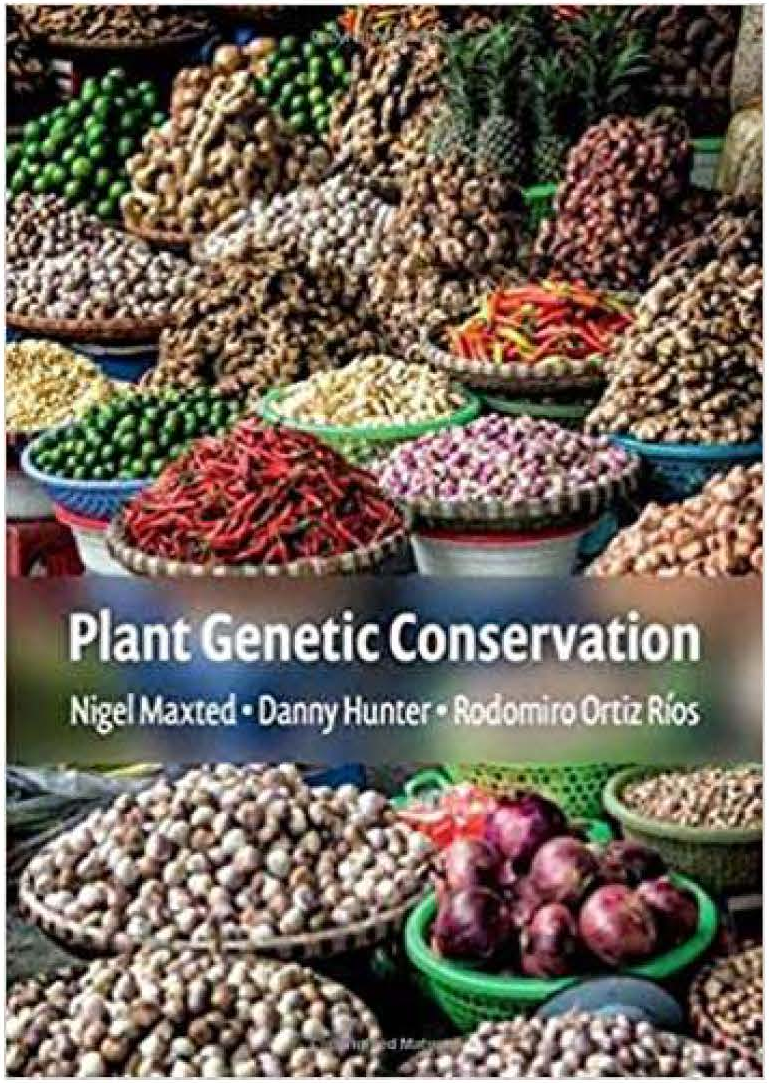
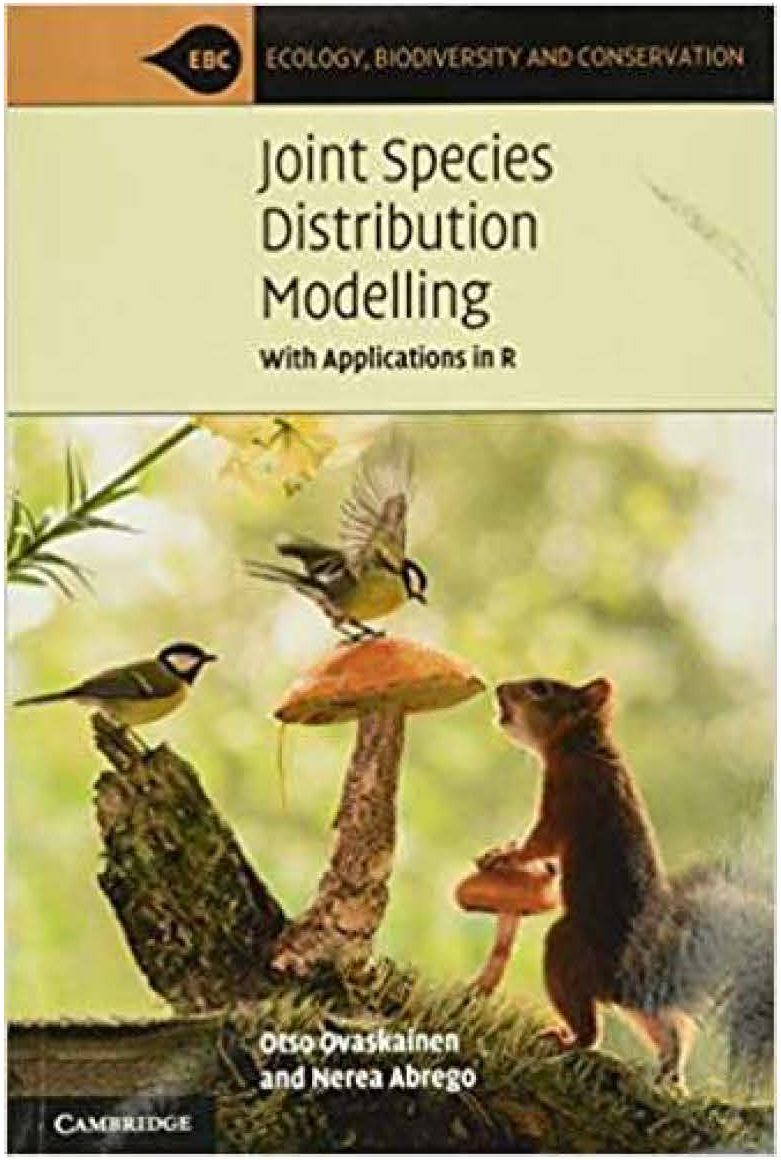


Plant Genetic Conservation

AUTHORS:
Nigel Maxted, University of Birmingham
Danny Hunter, Bioversity International
Rodomiro Ortiz Ríos, Swedish University of Agricultural Sciences

PUBLISHER: Cambridge University Press
DATE PUBLISHED: October 2020
FORMAT: Paperback
ISBN: 9780521001304
PRICE: $ 59.99 DL

Plant diversity sustains all animal life, and the genetic diversity within plants underpins global food security. This text provides a practical and theoretical introduction to the strategies and actions to adopt for conserving plant genetic variation, as well as explaining how humans can exploit this diversity for sustainable development. Notably readable, it initially offers current knowledge on the characterization and evaluation of plant genetic resources. The authors then discuss strategies from in situ and ex situ conservation to crop breeding, exploring how these can be used to improve food security in the face of increasing agrobiodiversity loss, human population growth and climate change. Each chapter draws on examples from the literature or the authors' research and includes further reading references. Containing other useful features such as a glossary, it is invaluable for professionals and undergraduate and graduate students in plant sciences, ecology, conservation, genetics and natural resource management.



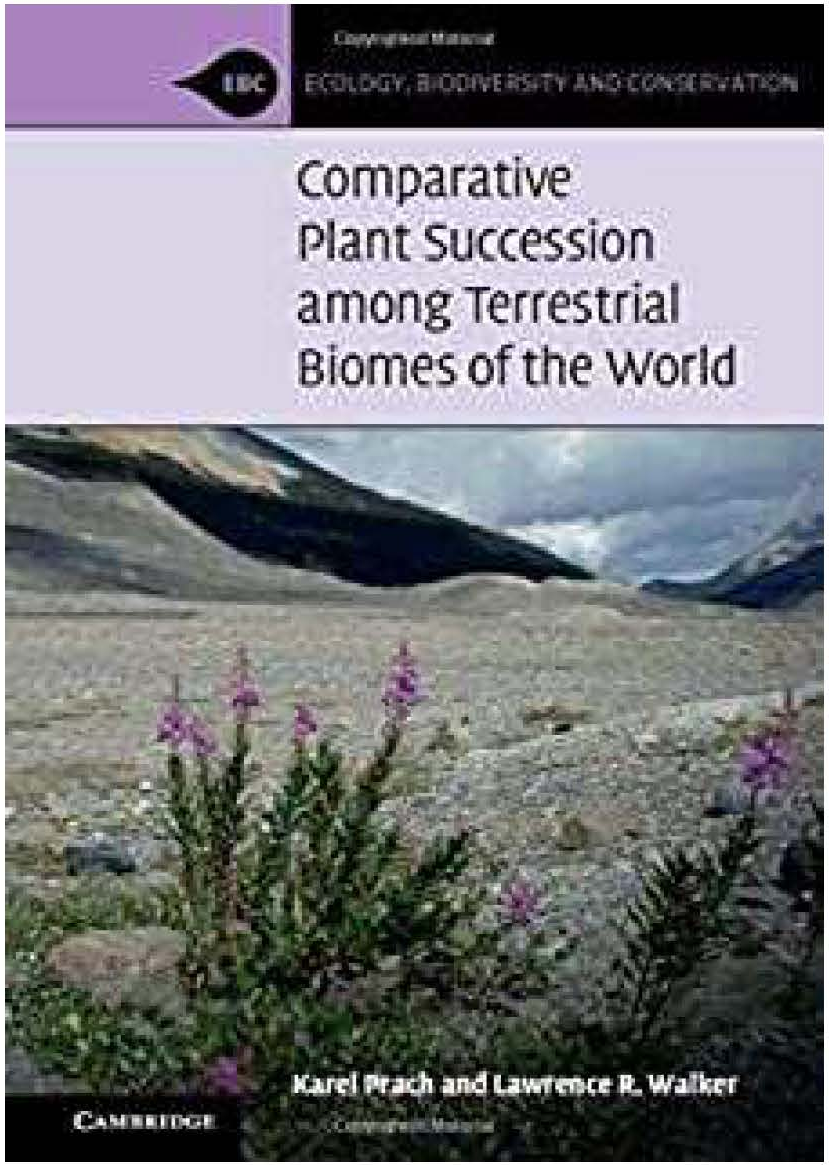
Joint Species Distribution Modelling

With Applications in R

AUTHORS:
Otso Ovaskainen, University of Helsinki
Nerea Abrego, University of Helsinki

PUBLISHER: Cambridge University Press
DATE PUBLISHED: July 2020
FORMAT: Paperback
ISBN: 9781108716789
PRICE: $ 44.99 DL

Joint species distribution modelling (JSDM) is a fast-developing field and promises to revolutionise how data on ecological communities are analysed and interpreted. Written for both readers with a limited statistical background, and those with statistical expertise, this book provides a comprehensive account of JSDM. It enables readers to integrate data on species abundances, environmental covariates, species traits, phylogenetic relationships, and the spatio-temporal context in which the data have been acquired. Step-by-step coverage of the full technical detail of statistical methods is provided, as well as advice on interpreting results of statistical analyses in the broader context of modern community ecology theory. With the advantage of numerous example R-scripts, this is an ideal guide to help graduate students and researchers learn how to conduct and interpret statistical analyses in practice with the R-package Hmsc, providing a fast starting point for applying joint species distribution modelling to their own data.

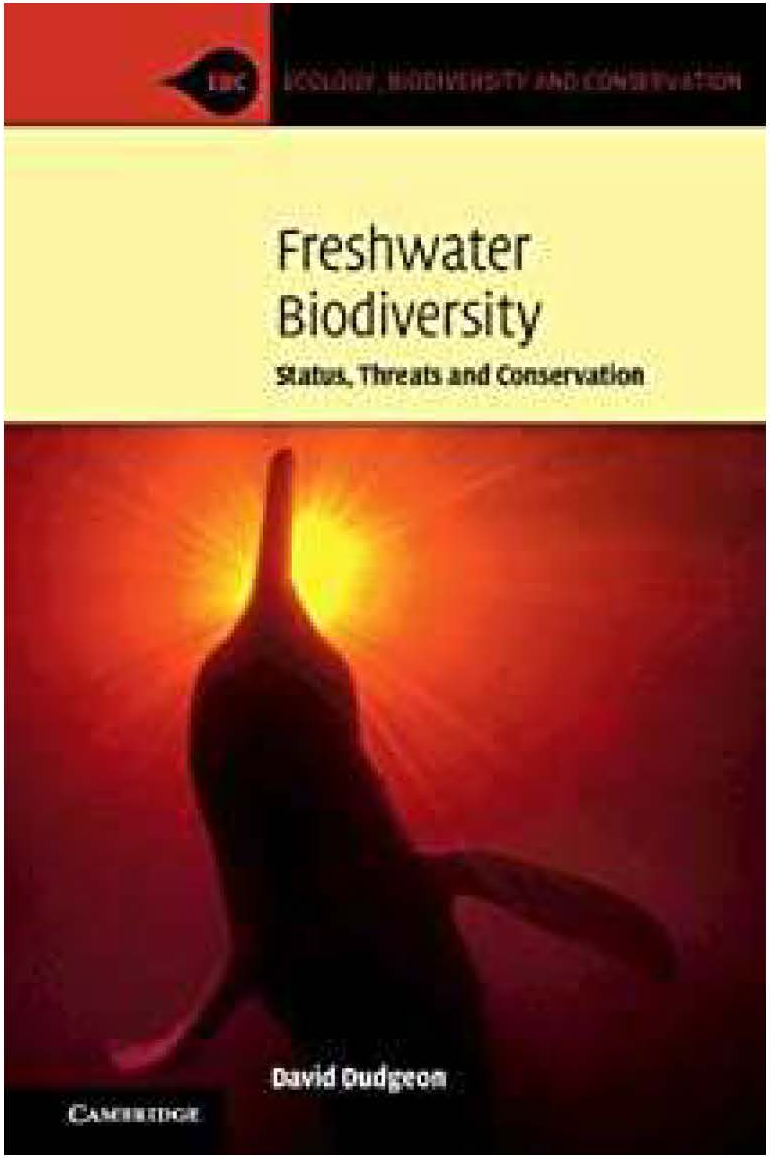


Comparative Plant Succession among Terrestrial Biomes of the World

AUTHORS:
Karel Prach, University of South Bohemia, Czech Republic
Lawrence R. Walker, University of Nevada, Las Vegas

PUBLISHER: Cambridge University Press
DATE PUBLISHED: July 2020
FORMAT: Paperback
ISBN: 9781108460248
PRICE: $ 44.99 DL

Despite a century of study by ecologists, recovery following disturbances (succession) is not fully understood. This book provides the first global synthesis that compares plant succession in all major terrestrial biomes and after all major terrestrial disturbances. It asks critical questions such as: Does succession follow general patterns across biomes and disturbance types? Do factors that control succession differ from biome to biome? If common drivers exist, what are they? Are they abiotic or biotic, or both? The authors provide insights on broad, generalizable patterns that go beyond site-specific studies, and present discussions on factors such as varying temporal dynamics, latitudinal differences, human-caused vs. natural disturbances, and the role of invasive alien species. This book is a must-read for researchers and students in ecology, plant ecology, restoration ecology and conservation biology. It also provides a valuable framework to aid land managers attempting to manipulate successional recovery following increasingly intense and widespread human-made disturbances.



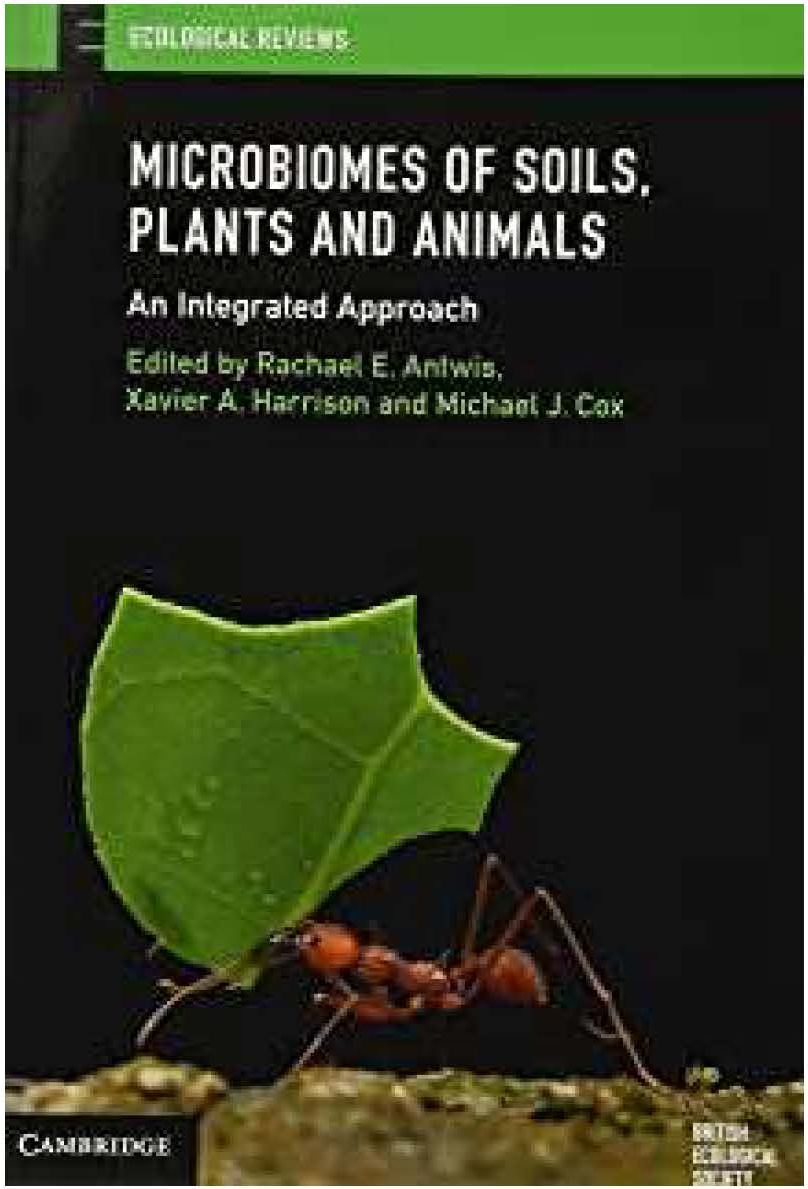
Freshwater Biodiversity

Status, Threats and Conservation

AUTHOR: David Dudgeon, The University of Hong Kong

PUBLISHER: Cambridge University Press
DATE PUBLISHED: July 2020
FORMAT: Paperback
ISBN: 9780521745192
PRICE: $ 44.99 DL

Growing human populations and higher demands for water impose increasing impacts and stresses upon freshwater biodiversity. Their combined effects have made these animals more endangered than their terrestrial and marine counterparts. Overuse and contamination of water, overexploitation and overfishing, introduction of alien species, and alteration of natural flow regimes have led to a 'great thinning' and declines in abundance of freshwater animals, a 'great shrinking' in body size with reductions in large species, and a 'great mixing' whereby the spread of introduced species has tended to homogenize previously dissimilar communities in different parts of the world. Climate change and warming temperatures will alter global water availability, and exacerbate the other threat factors. What conservation action is needed to halt or reverse these trends, and preserve freshwater biodiversity in a rapidly changing world? This book offers the tools and approaches that can be deployed to help conserve freshwater biodiversity.



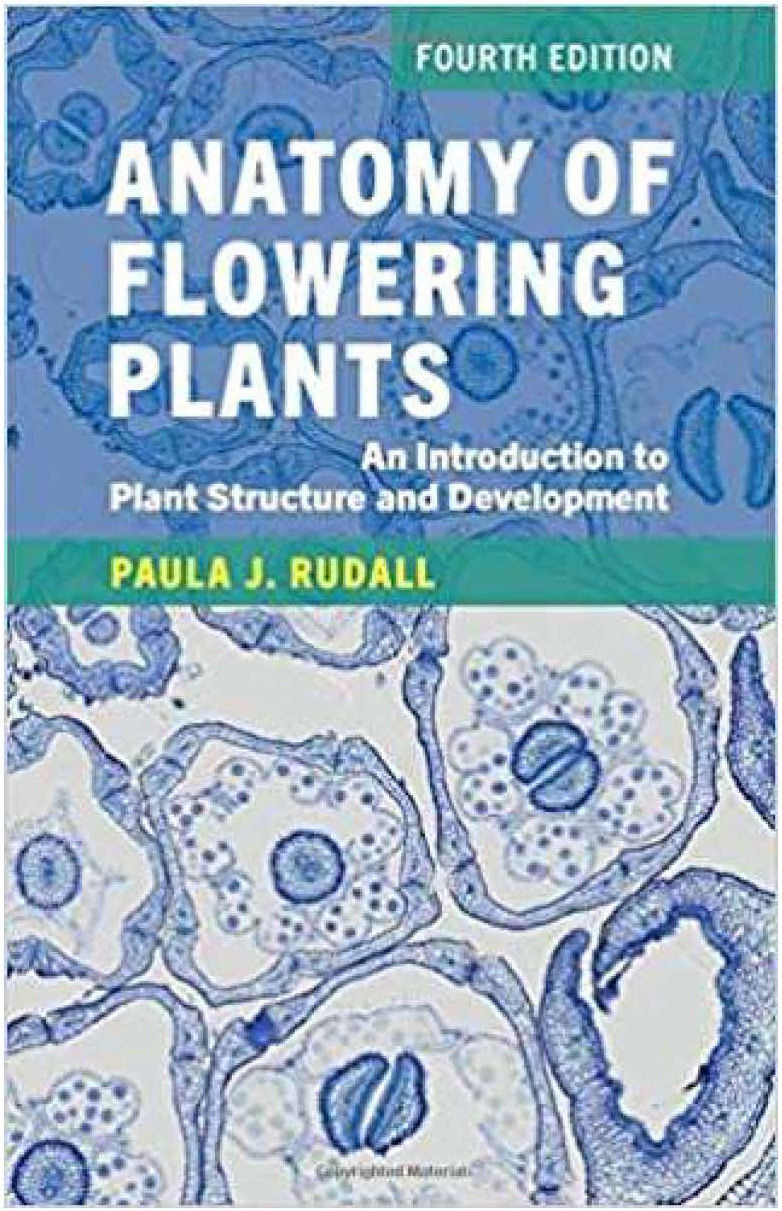
Microbiomes of Soils, Plants and Animals

An Integrated Approach

EDITORS:
Rachael E. Antwis, University of Salford
Xavier A. Harrison, University of Exeter
Michael J. Cox, University of Birmingham

PUBLISHER: Cambridge University Press
DATE PUBLISHED: May 2020
FORMAT: Paperback
ISBN: 9781108462488
PRICE: $ 44.99 DL

Through a long history of co-evolution, multicellular organisms form a complex of host cells plus many associated microorganism species. Consisting of algae, bacteria, archaea, fungi, protists and viruses, and collectively referred to as the microbiome, these microorganisms contribute to a range of important functions in their hosts, from nutrition, to behaviour and disease susceptibility. In this book, a diverse and international group of active researchers outline how multicellular organisms have become reliant on their microbiomes to function, and explore this vital interdependence across the breadth of soil, plant, animal and human hosts. They draw parallels and contrasts across hosts in different environments, and discuss how this invisible microbial ecosystem influences everything from the food we eat, to our health, to the correct functioning of ecosystems we depend on. This insightful read also pertinently encourages students and researchers in microbial ecology, ecology, and microbiology to consider how this interdependence may be key to mitigating environmental changes and developing microbial biotechnology to improve life on Earth.



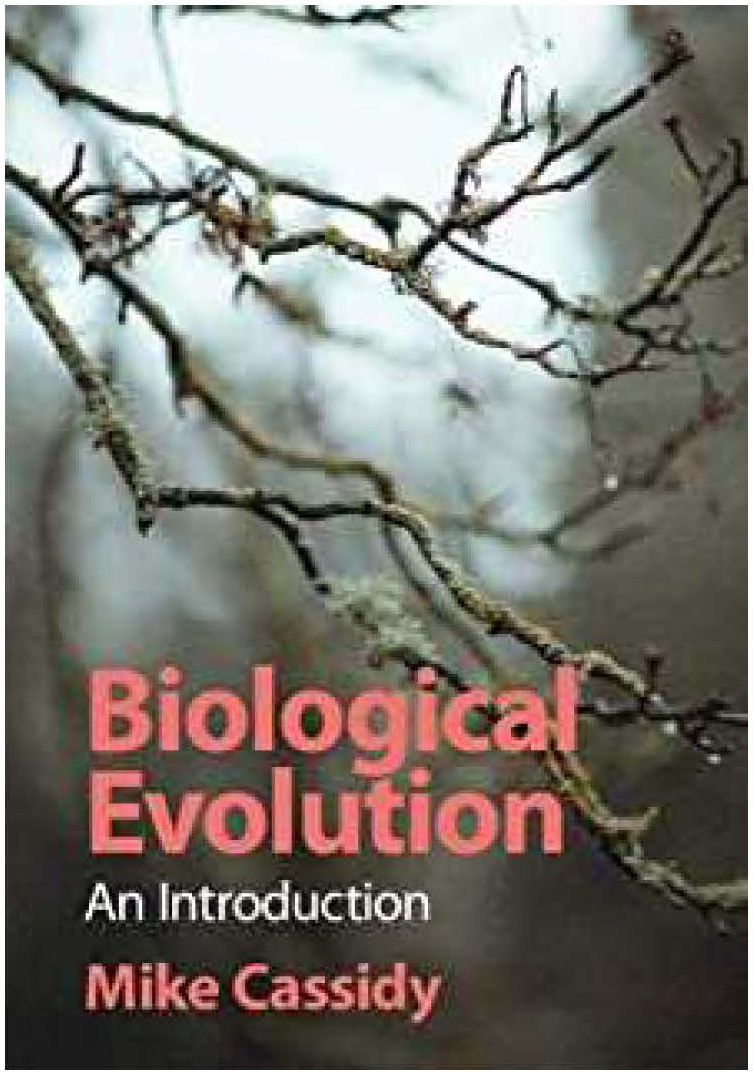
Anatomy of Flowering Plants

An Introduction to Plant Structure and Development

4th Edition

AUTHOR: Paula J. Rudall, Royal Botanic Gardens, Kew
PUBLISHER: Cambridge University Press
DATE PUBLISHED: December 2020
AVAILABILITY: In stock
FORMAT: Paperback
ISBN: 9781108749121
PRICE: $ 34.99 DL

Understanding plant anatomy is not only fundamental to the study of plant systematics and palaeobotany, but is also an essential part of evolutionary biology, physiology, ecology and the rapidly expanding science of developmental genetics. This modernised new edition covers all aspects of comparative plant structure and development, arranged in a series of chapters on the stem, root, leaf, flower, pollen, seed and fruit. Internal structures are described using magnification aids from the simple hand-lens to the electron microscope. Numerous references to recent topical literature are included, and new illustrations reflect a wide range of flowering plant species. The phylogenetic context of plant names has been updated as a result of improved understanding of the relationships among flowering plants. This clearly written text is ideal for students studying a wide range of courses in botany and plant science, and is also an excellent resource for professional and amateur horticulturists.



Biological Evolution

An Introduction

AUTHOR: Mike Cassidy, Durham University
PUBLISHER: Cambridge University Press
DATE PUBLISHED: December 2020
FORMAT: Paperback
ISBN: 9780521012058
PRICE: $ 39.99 DL

Biological evolution, the theory of natural selection and of common descent, is a triumph both of human reasoning and scientific undertaking. The biological discipline of evolution contains both a chronicle of human endeavour and the story of life on Earth. This book is concerned with living forms and how they developed from 'simple and unpromising beginnings'. It considers evolution as both process and product. The author, an experienced teacher and educator, employs a historical narrative, used to convey the idea of 'change with modification' and to emphasise the relevance of evolution to contemporary bioscience. Biological evolution has now become part of the scientific orthodoxy and this accessible text will assist undergraduate students in the biological sciences within any ongoing debate.

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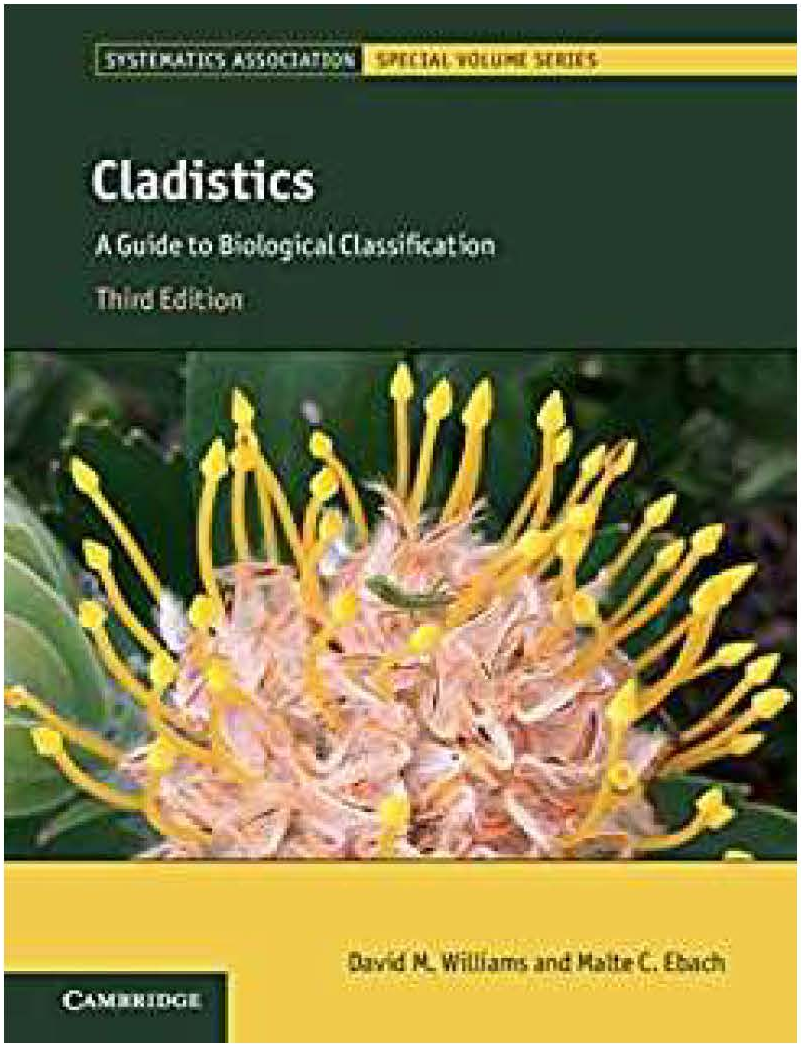


Cladistics

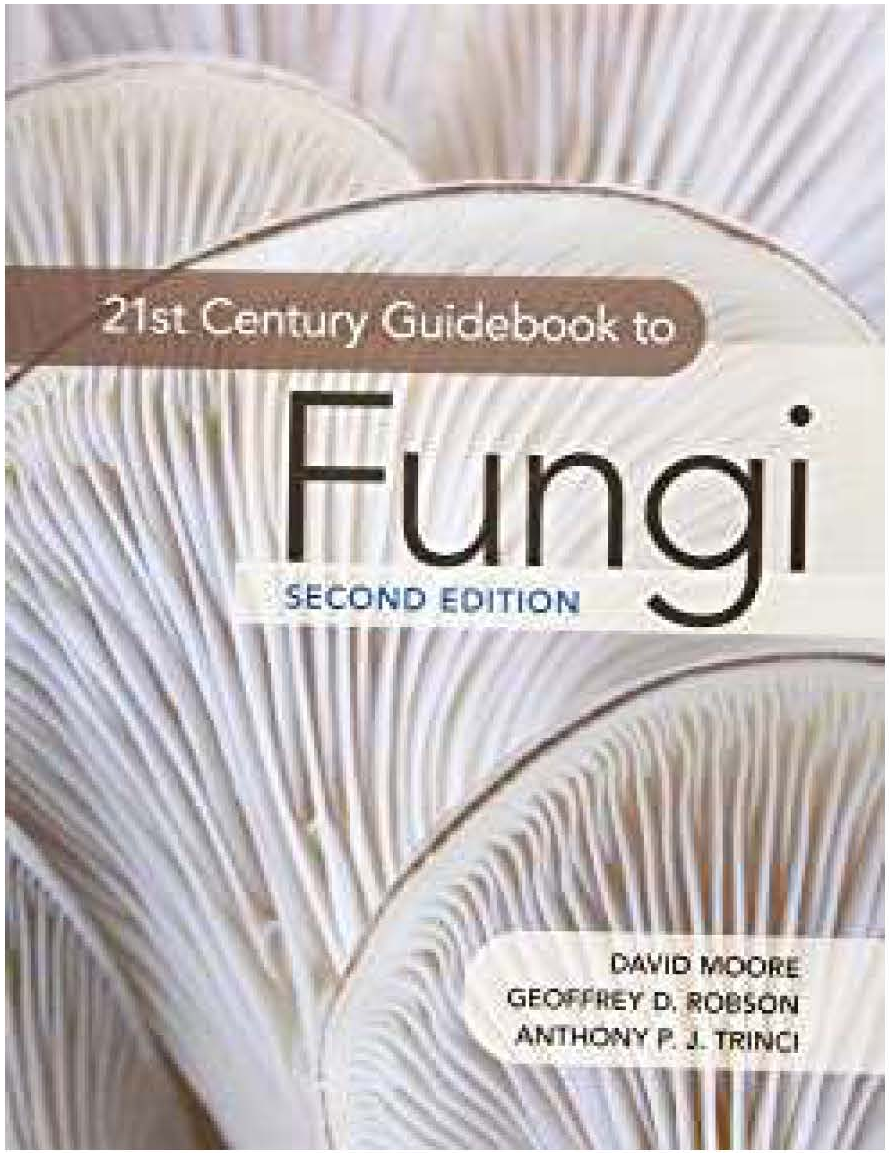
A Guide to Biological Classification

3rd Edition

AUTHORS:
David M. Williams, Natural History Museum, London
Malte C. Ebach, University of New South Wales, Sydney

PUBLISHER: Cambridge University Press
DATE PUBLISHED: September 2020
FORMAT: Paperback
ISBN: 9781107400412
PRICE: $ 44.99 DL

This new edition of a foundational text presents a contemporary review of cladistics, as applied to biological classification. It provides a comprehensive account of the past fifty years of discussion on the relationship between classification, phylogeny and evolution. It covers cladistics in the era of molecular data, detailing new advances and ideas that have emerged over the last twenty-five years. Written in an accessible style by internationally renowned authors in the field, readers are straightforwardly guided through fundamental principles and terminology. Simple worked examples and easy-to-understand diagrams also help readers navigate complex problems that have perplexed scientists for centuries. This practical guide is an essential addition for advanced undergraduates, postgraduates and researchers in taxonomy, systematics, comparative biology, evolutionary biology and molecular biology.



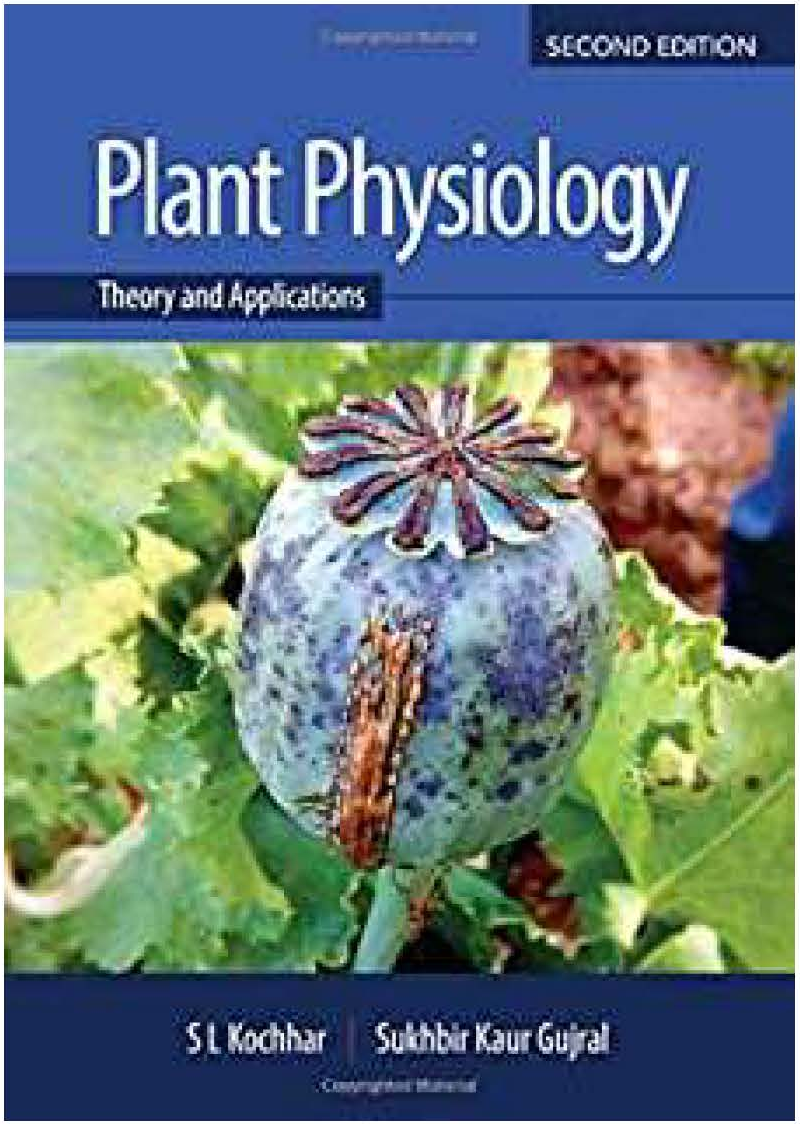
21st Century Guidebook to Fungi

2nd Edition

AUTHORS:
David MooreGeoffrey D. Robson, University of Manchester
Anthony P. J. Trinci, University of Manchester

PUBLISHER: Cambridge University Press
DATE PUBLISHED: June 2020
FORMAT: Paperback
ISBN: 9781108745680
PRICE: $ 64.99 DL

The mysterious world of fungi is once again unearthed in this expansive second edition. This textbook provides readers with an all-embracing view of the kingdom fungi, ranging in scope from ecology and evolution, diversity and taxonomy, cell biology and biochemistry, to genetics and genomics, biotechnology and bioinformatics. Adopting a unique systems biology approach - and using explanatory figures and colour illustrations - the authors emphasise the diverse interactions between fungi and other organisms. They outline how recent advances in molecular techniques and computational biology have fundamentally changed our understanding of fungal biology, and have updated chapters and references throughout the book in light of this. This is a fascinating and accessible guide, which will appeal to a broad readership - from aspiring mycologists at undergraduate and graduate level to those studying related disciplines. Online resources are hosted on a complementary website.



Plant Physiology

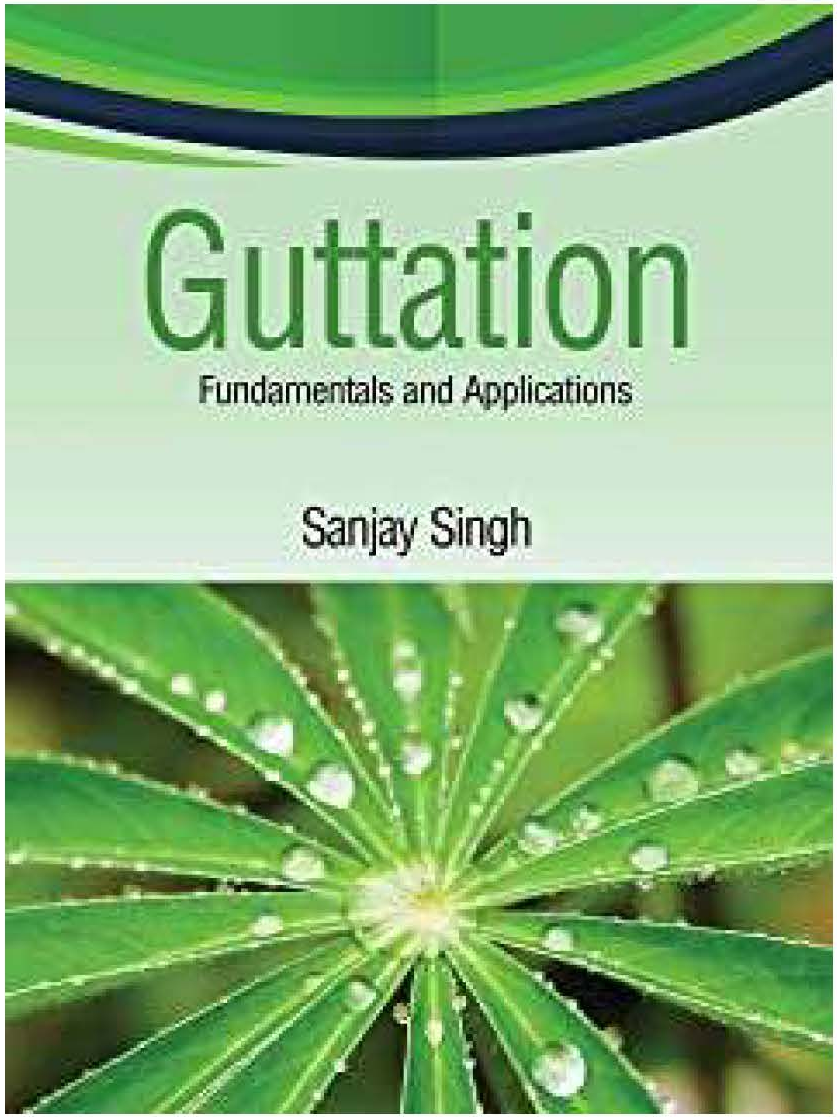
Theory and Applications

2nd Edition

AUTHORS:
S. L. Kochhar, University of Delhi
Sukhbir Kaur Gujral, University of Delhi

PUBLISHER: Cambridge University Press
DATE PUBLISHED: January 2021
FORMAT: Hardback
ISBN: 9781108486392
PRICE: $ 89.99 DL

This thoroughly revised and updated edition provides an accessible overview of the rapidly advancing field of plant physiology. Key topics covered include absorption of water, ascent of sap, transpiration, mineral nutrition, fat metabolism, enzymes and plant hormones. Separate chapters are included on photosynthesis, respiration and nitrogen metabolism, and emphasis is placed on their contribution to food security, climate resilient farming (or climate-smart agriculture) and sustainable development. There is also a chapter on the seminal contributions of plant physiologists. Supported by the inclusion of laboratory experimental exercises and solved numerical problems, the text emphasises the conceptual framework, for example, in coverage of topics such as thermodynamics, water potential gradients and energy transformation during metabolic processes, water use efficiency (WUE) and nitrogen use efficiency (NUE). Bringing together the theoretical and practical details, this text is accessible, self-contained and student-friendly.



Guttation
Fundamentals and Applications

AUTHOR: Sanjay Singh, Mizan - Tepi University, Ethopia
PUBLISHER: Cambridge University Press
DATE PUBLISHED: January 2021
AVAILABILITY: In stock
FORMAT: Hardback
ISBN: 9781108487023
PRICE: $ 125.00 DL

The phenomenon of guttation finds applications in a wide range of areas, including plant biology, ecology, agriculture, horticulture, animal husbandry, pharmacology and medicine. This unique text provides a comprehensive review of this process. It explores the genetic, environmental, and edaphic factors that control and regulate guttation; and discusses in detail the impact of guttation on soil-plant-animal-environment systems, soil fertility and soil productivity, plant water balance, plant physiological research, ecosystem maintenance, and hydathode retrieval of water and solute. A separate chapter addresses practical applications, such as in the production of recombinant proteins for commercial use, seed protein, alkaloids, pharmaceutical drugs, resins, gums, and rubber. Besides specialists in plant sciences, the book will also appeal to anyone interested in the topic of plant-water relationships.

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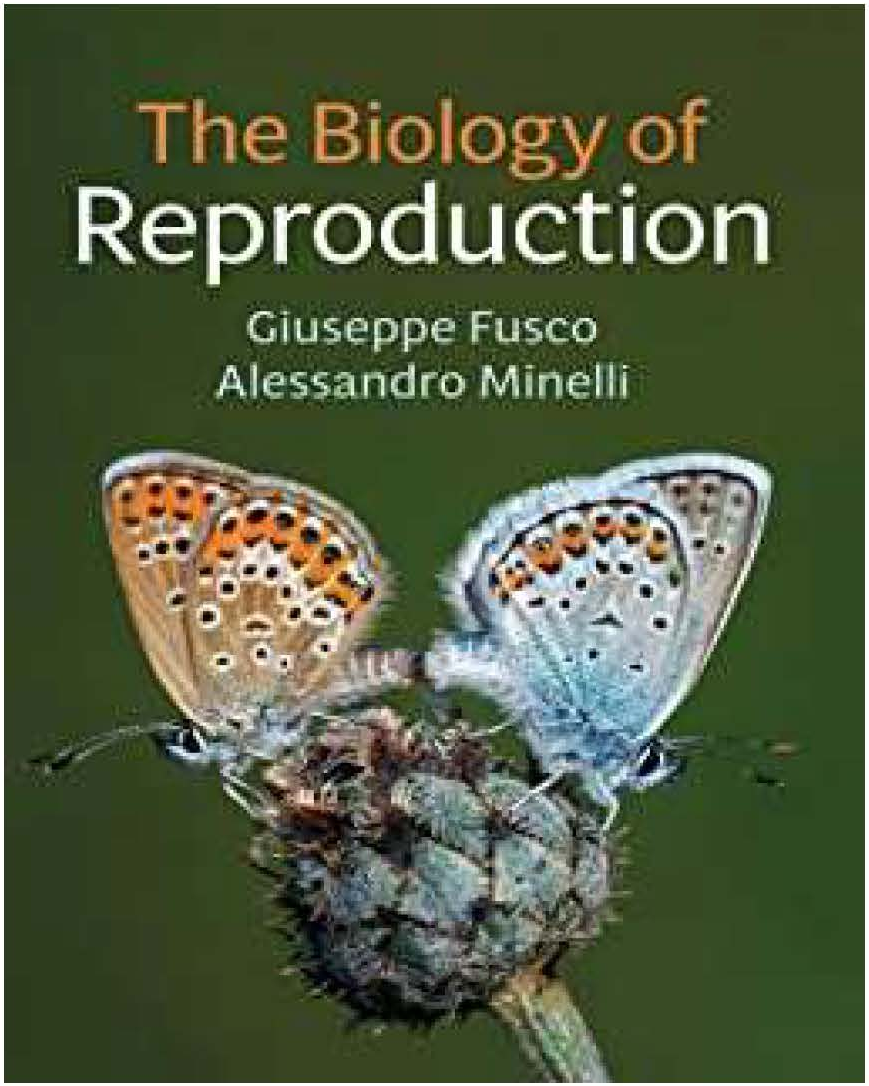
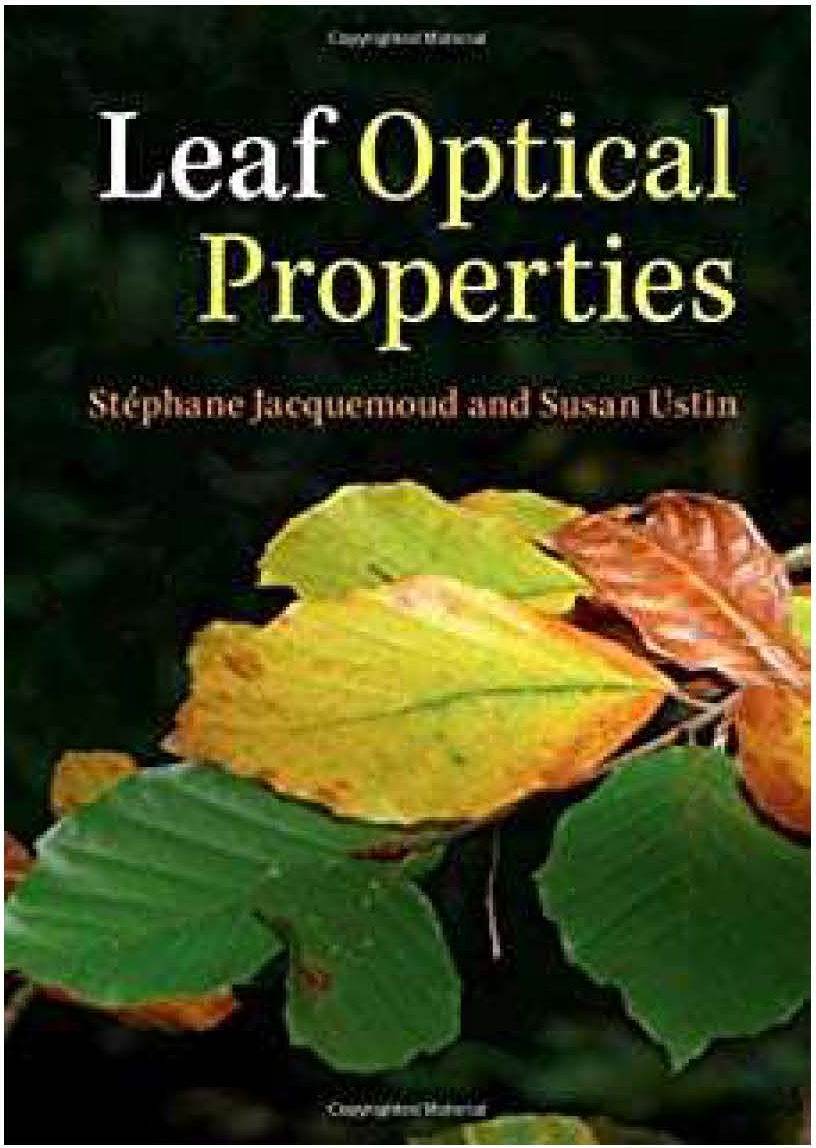


The Biology of Reproduction

AUTHORS:
Giuseppe Fusco, Università degli Studi di Padova, Italy
Alessandro Minelli, Università degli Studi di Padova, Italy

PUBLISHER: Cambridge University Press
DATE PUBLISHED: November 2019
FORMAT: Paperback
ISBN: 9781108731713
PRICE: $ 44.99 DL

Reproduction is a fundamental feature of life, it is the way life persists across the ages. This book offers new, wider vistas on this fundamental biological phenomenon, exploring how it works through the whole tree of life. It explores facets such as asexual reproduction, parthenogenesis, sex determination and reproductive investment, with a taxonomic coverage extended over all the main groups - animals, plants including 'algae', fungi, protists and bacteria. It collates into one volume perspectives from varied disciplines - including zoology, botany, microbiology, genetics, cell biology, developmental biology, evolutionary biology, animal and plant physiology, and ethology - integrating information into a common language. Crucially, the book aims to identify the commonalties among reproductive phenomena, while demonstrating the diversity even amongst closely related taxa. Its integrated approach makes this a valuable reference book for students and researchers, as well as an effective entry point for deeper study on specific topics.

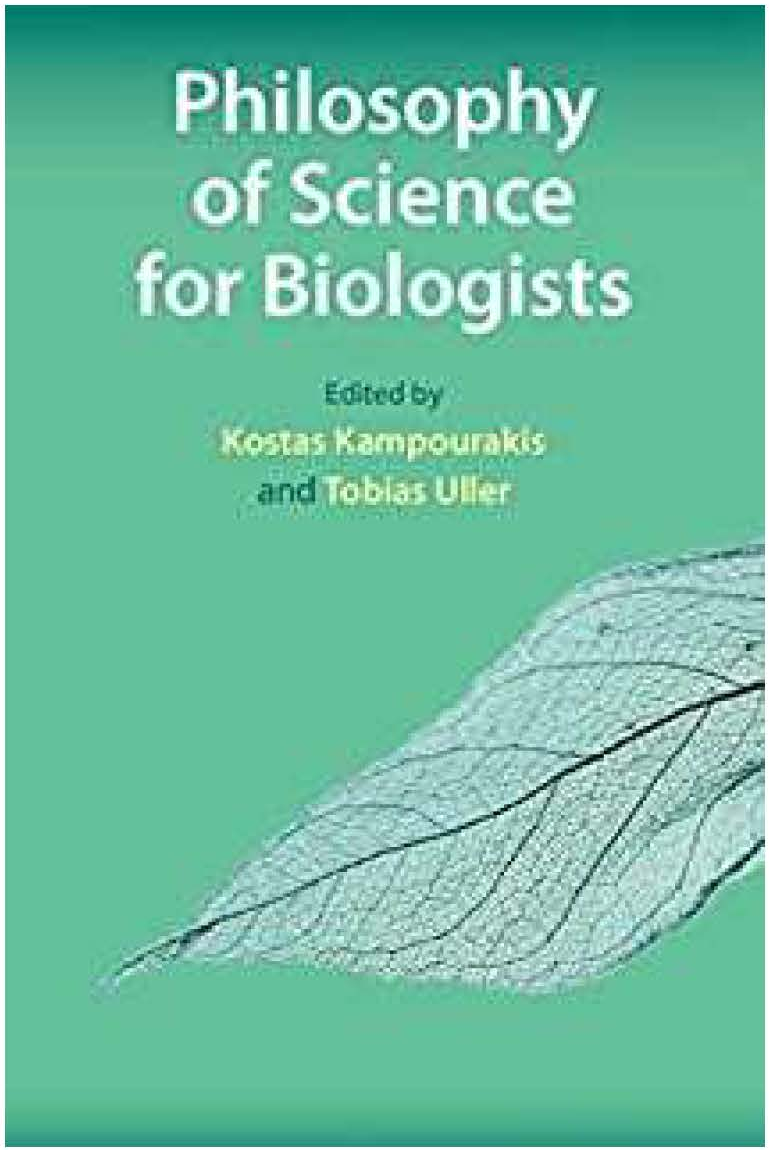


Leaf Optical Properties

AUTHORS:
Stéphane Jacquemoud, Université Paris Diderot
Susan Ustin, University of California, Davis

PUBLISHER: Cambridge University Press
DATE PUBLISHED: October 2019
FORMAT: Hardback
ISBN: 9781108481267
PRICE: $ 89.99 DL

Plant leaves collectively represent the largest above-ground surface area of plant material in virtually all environments. Their optical properties determine where and how energy and gas exchange occurs, which in turn drives the energy budget of the planet, and defines its ecology and habitability. This book reviews the state-of-the-art research on leaf optics. Topics covered include leaf traits, the anatomy and structure of leaves, leaf colour, biophysics and spectroscopy, radiometry, radiative transfer models, and remote and proximal sensing. A physical approach is emphasised throughout, providing the necessary foundations in physics, chemistry and biology to make the context accessible to readers from various subject backgrounds. It is a valuable resource for advanced students, researchers and government agency practitioners in remote sensing, plant physiology, ecology, resource management and conservation.

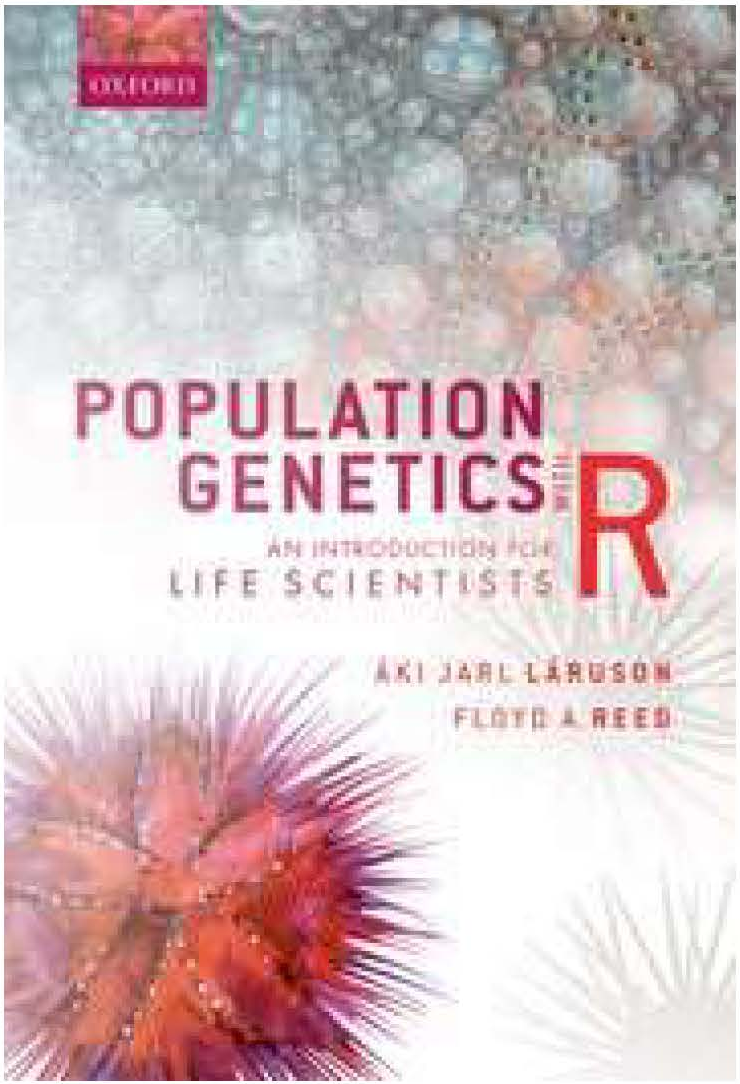


Philosophy of Science for Biologists

EDITORS:
Kostas Kampourakis, Université de Genève
Tobias Uller, Lunds Universitet, Sweden

PUBLISHER: Cambridge University Press
DATE PUBLISHED: November 2020
FORMAT: Paperback
ISBN: 9781108740708
PRICE: $ 34.99 DL

Biologists rely on theories, apply models and construct explanations, but rarely reflect on their nature and structure. This book introduces key topics in philosophy of science to provide the required philosophical background for this kind of reflection, which is an important part of all aspects of research and communication in biology. It concisely and accessibly addresses fundamental questions such as: Why should biologists care about philosophy of science? How do concepts contribute to scientific advancement? What is the nature of scientific controversies in the biological sciences? Chapters draw on contemporary examples and case studies from across biology, making the discussion relevant and insightful. Written for researchers and advanced undergraduate and graduate students across the life sciences, its aim is to encourage readers to become more philosophically minded and informed to enable better scientific practice. It is also an interesting and pertinent read for philosophers of science.



Population Genetics with R

Áki Jarl Láruson
OXFORD
2021
9780198829539
$ 95.00 DL

Beginning with the groundwork of installing and using R (including CRAN and the RStudio IDE), the book works through the use of basic commands for data manipulation. An introduction to basic terminology in population genetics follows, clearly explaining how these fundamental assumptions can provide insights and form basic inferences for real populations. The focus then moves onto statistical tests including writing and running algorithms as functions. Subsequent chapters examine genetic variation, adaptation, and natural selection as well as different approaches to population differences.

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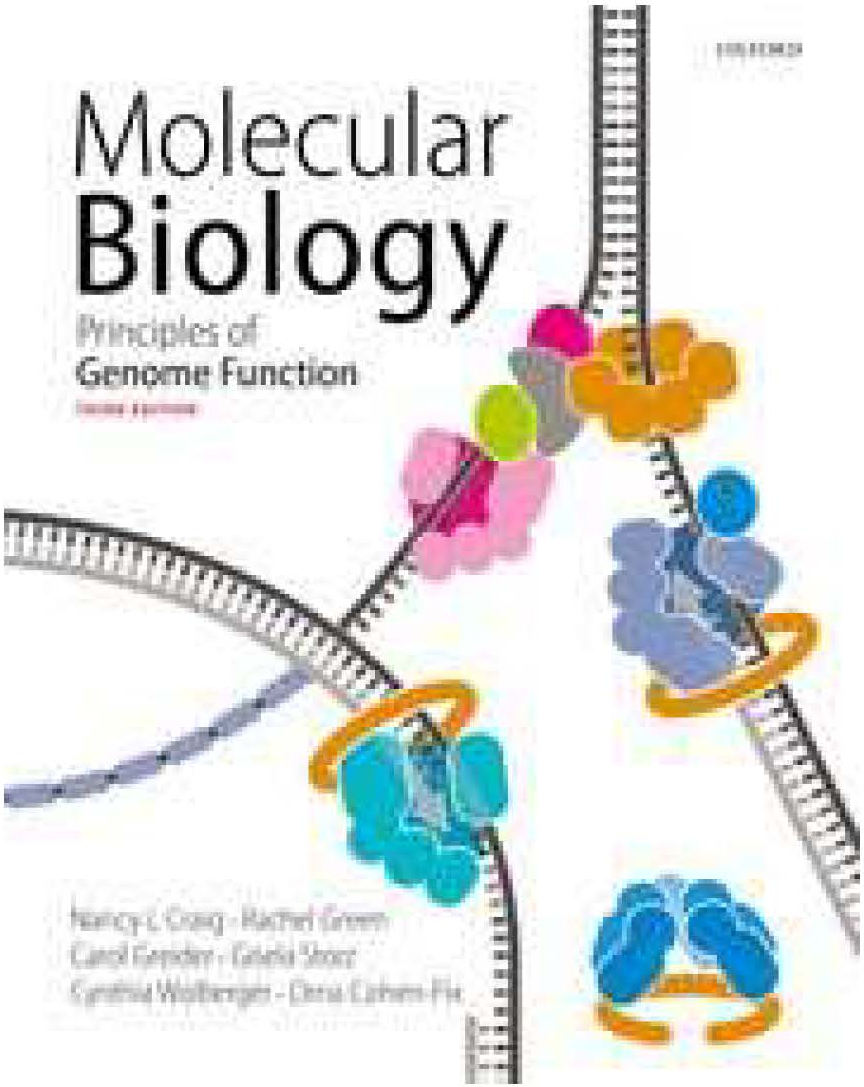

Molecular Biology

Principles of Genome Function

Third Edition

Nancy L. Craig
OXFORD
2021
9780198788652
$ 82.95 DL

The biological world operates on a multitude of scales--from molecules to cells to tissues to organisms to ecosystems. Throughout all these levels runs a common thread: the communication and onward passage of information--from cell to cell, from organism to organism and, ultimately, from generation to generation. But how does this information--no more than a static repository of data--come alive to govern the processes that constitute life?

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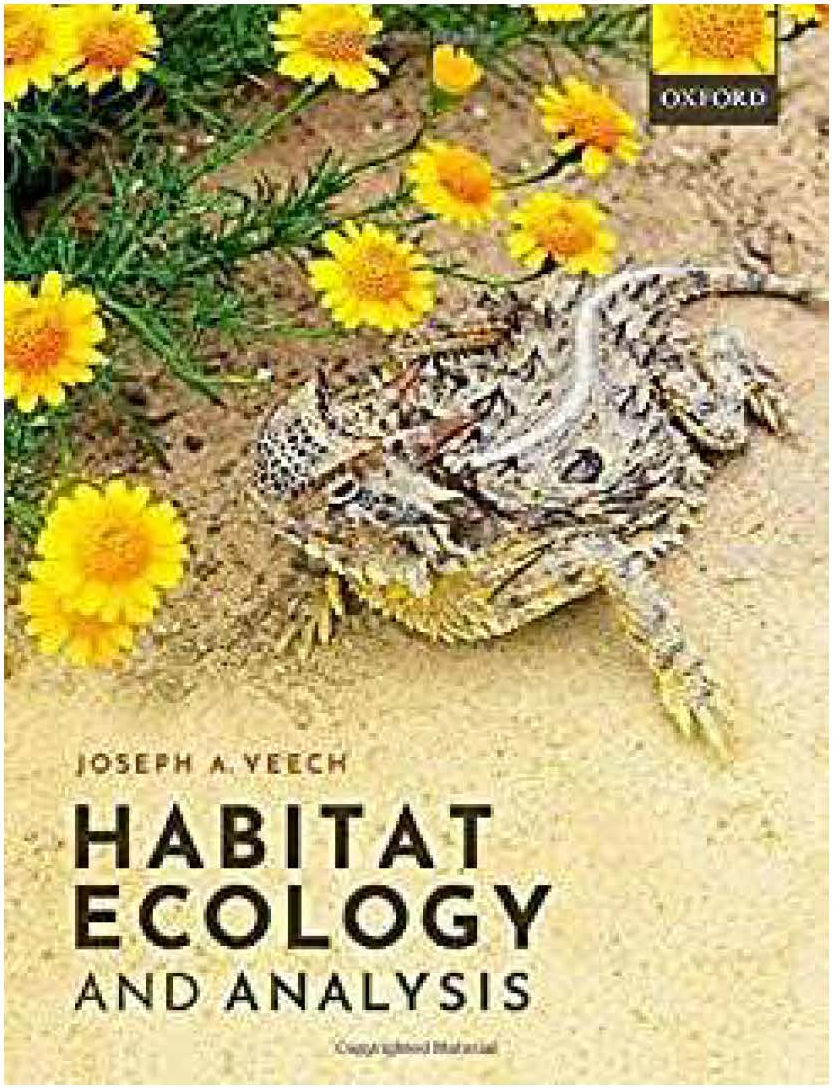

Habitat Ecology and Analysis

Joseph A. Veech
OXFORD
2021
9780198829287
$ 100.00 DL

The identification and analysis of the particular habitat needs of a species has always been a central focus of research and applied conservation in both ecology and wildlife biology. Although these two academic communities have developed quite separately over many years, there is now real value in attempting to unify them to allow better communication and awareness by practitioners and students from each discipline. Habitat Ecology and Analysis is written for senior undergraduate and graduate students taking courses in wildlife ecology, conservation biology, and habitat ecology as well as, wildlife biologists, conservation biologists.

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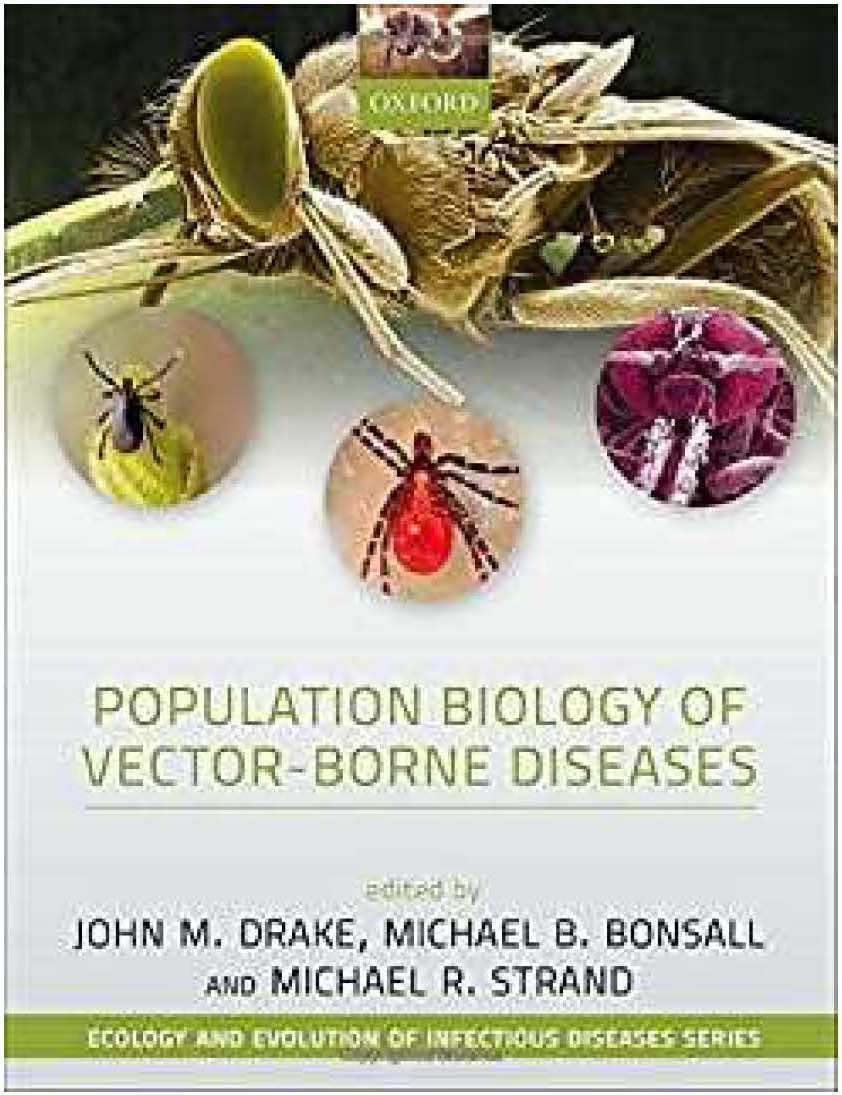

Population Biology of Vector-Borne Diseases

John M. Drake
OXFORD
2021
9780198853244
$ 100.00 DL

Population Biology of Vector-Borne Diseases is an advanced textbook suitable for graduate level students taking courses in vector biology, population ecology, evolutionary ecology, disease ecology, medical entomology, viral ecology/evolution, and parasitology, as well as providing a key reference for researchers across these fields.

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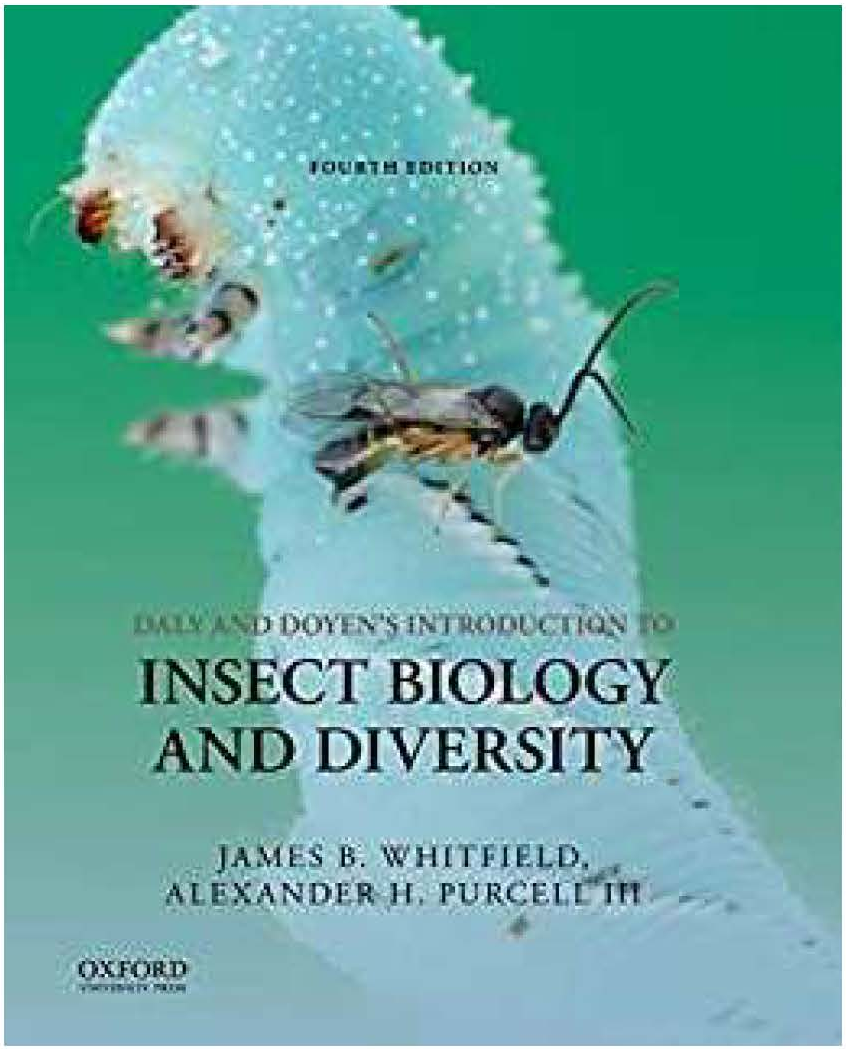
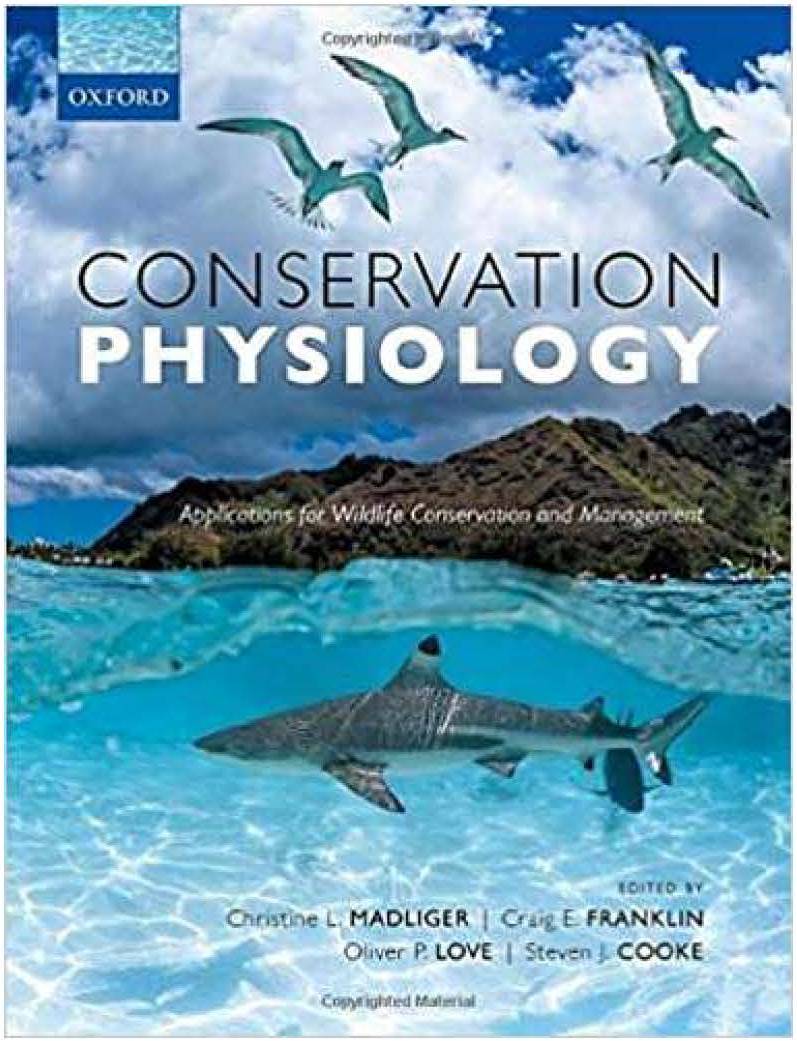


Daly and Doyen's Introduction to Insect Biology

Fourth Edition

James B. Whitfield
OXFORD
2021
9780190853167
$170.95 DL

The fourth edition of Daly and Doyen's Introduction to Insect Biology and Diversity presents the ideal balance of basic biological principles and in-depth treatment of insect classification, including keys for identifying more than four hundred families. In this fourth edition, James B. Whitfield, of the University of Illinois, Urbana-Champaign, continues as lead author, bringing a wealth of expertise on molecular analysis relating to development and systematics. Five taxonomic chapters have been extensively revised by experts in the respective groups: Chapter 18--Noninsect Hexapoda, Chapter 32--Psocoptera, Chapter 33--Phthiraptera, Chapter 34--Hemiptera, Chapter 35--Thysanoptera
Includes over 140 new current references (from 2012 to the present)
Upgraded illustration program includes more than 30 new and revised figures.

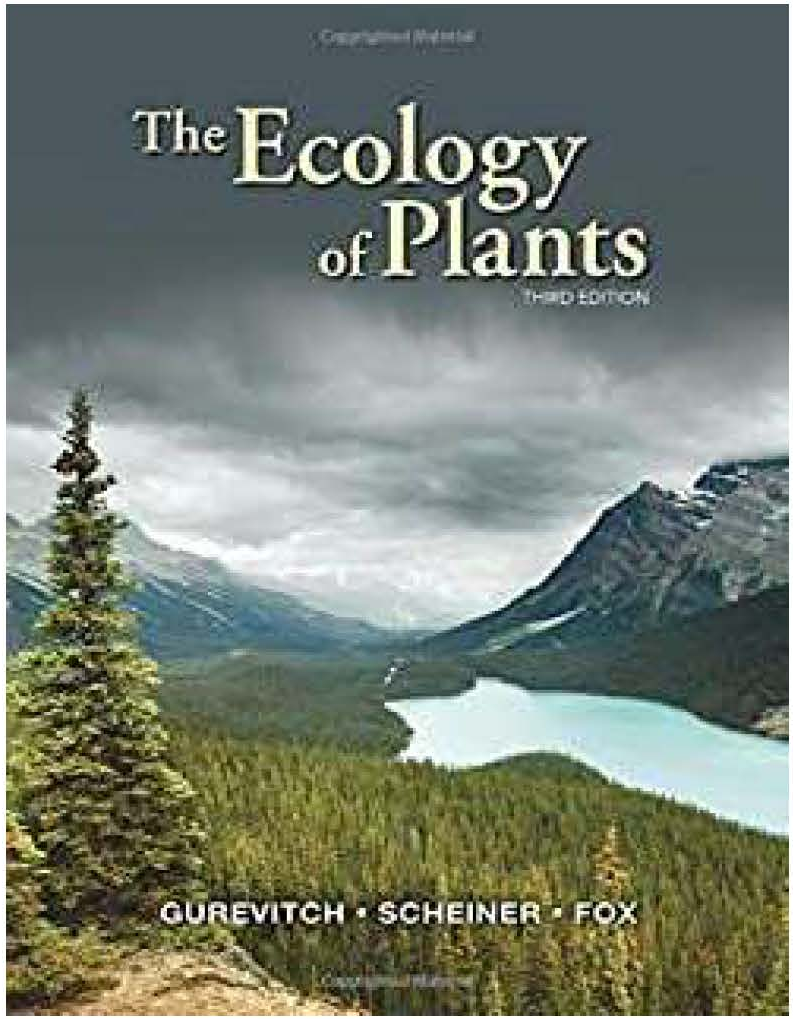


Conservation Physiology

Applications for Wildlife Conservation and Management

Christine L. Madliger
OXFORD
2021
9780198843610
$100.00 DL

Conservation physiology is a rapidly expanding, multidisciplinary field that utilizes physiological knowledge and tools to understand and solve conservation challenges. This novel text provides the first consolidated overview of its scope, purpose, and applications, with a focus on wildlife. It outlines the major avenues and advances by which conservation physiology is contributing to the monitoring, management, and restoration of wild animal populations. This book also defines opportunities for further growth in the field and identifies critical areas for future investigation. By using a series of global case studies, contributors illustrate how approaches from the conservation physiology toolbox can tackle a diverse range of conservation issues including the monitoring of environmental stress, predicting the impact of climate change, understanding disease dynamics, improving captive breeding, and reducing human-wildlife conflict. Moreover, by acting as practical road maps across a diversity of sub-disciplines, these case studies serve to increase the accessibility of this discipline to new researchers. The diversity of taxa, biological scales, and ecosystems highlighted illustrate the far-reaching nature of the discipline and allow readers to gain an appreciation for the purpose, value, applicability, and status of the field of conservation physiology.



The Ecology of Plants

Third Edition

Jessica Gurevitch
OXFORD
2020
9781605358291
$142.95 DL

The Ecology of Plants provides comprehensive, contemporary coverage of plant ecology. Now in its third edition, the text incorporates current scientific developments and includes hundreds of stunning photographs, insightful illustrations, and references. It also features a clean, modern design that makes the material accessible and appealing. The book covers a range of current and historical ecological topics, presented in an evolutionary context, with the focus on the interactions between plants and their environments over a range of scales. Some of the subjects covered are unique to plants, such as photosynthesis and the ecology of plant-soil interactions; other topics, such as resource and mate acquisition, emphasize the distinctive ways plants (in contrast to animals) deal with their environments. The book uniquely emphasizes the importance of evolutionary and other historical ecological processes as well as human environmental influences.

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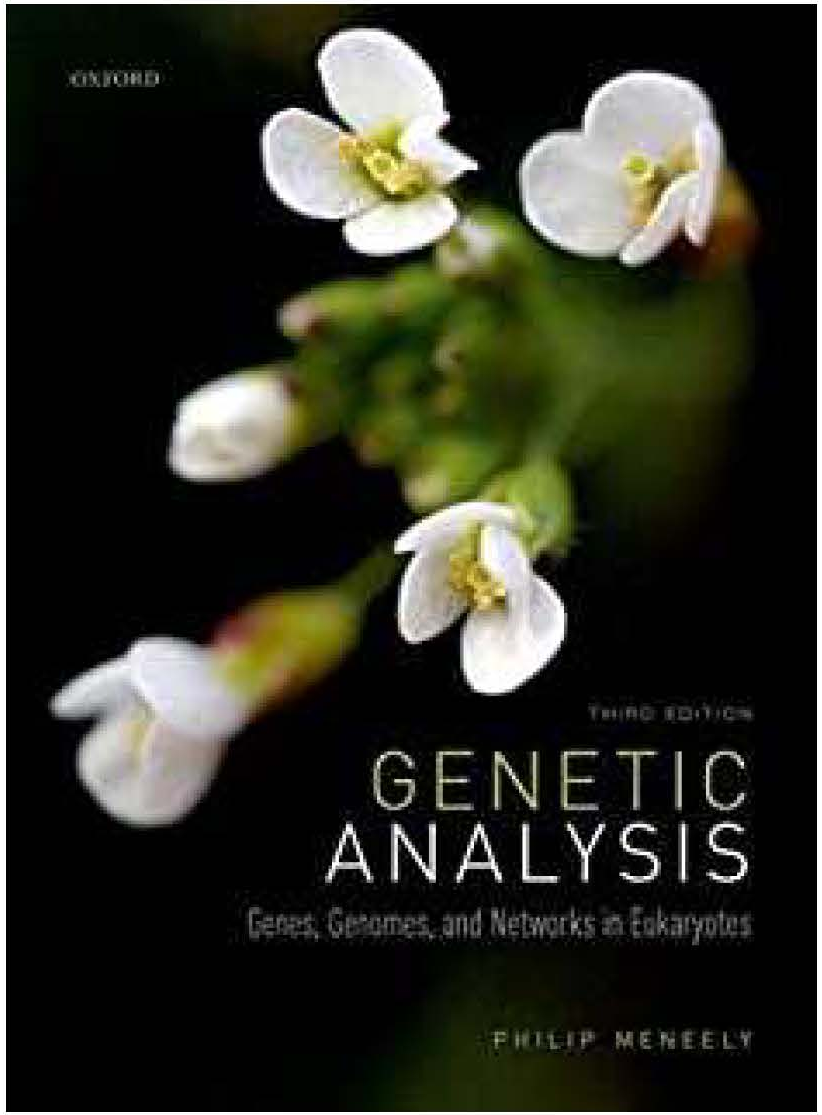

Genetic Analysis

Genes, Genomes, and Networks in Eukaryotes

Philip Meneely
OXFORD
2020
9780198809906
$74.95 DL

With its unique integration of genetics and molecular biology, Genetic Analysis probes fascinating questions such as these, detailing how our understanding of key genetic phenomena can be used to understand biological systems. Opening with a brief overview of key genetic principles, model organisms, and epigenetics, the book goes on to explore the use of gene mutations and the analysis of gene expression and activity. A discussion of the interactions of genes during suppression, synthetic enhancement, and epistasis follows, which is then expanded into a consideration of genetic networks and personal genomics.

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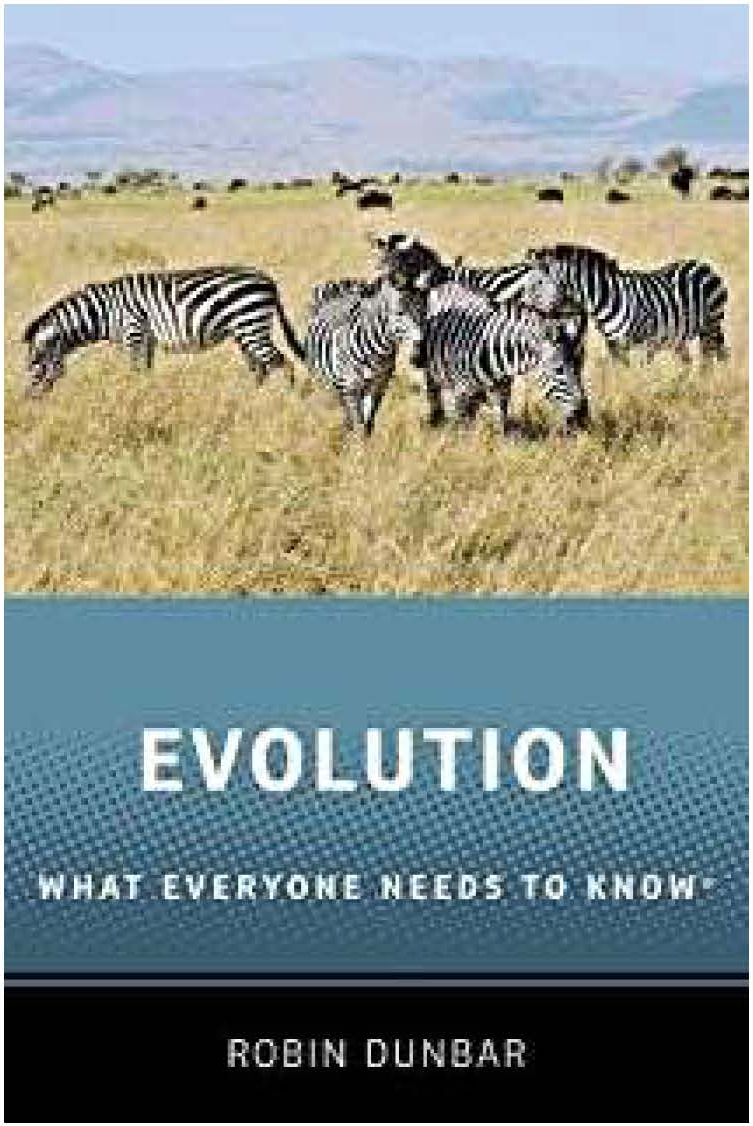

Evolution

Robin Dunbar
OXFORD
2020
9780190922894
$74.00 DL

This book provides an overview of the basic theory and showcases how widely its consequences reverberate across the life sciences, the social sciences and even the humanities. In this book, Robin Dunbar uses examples drawn from plant life, animals and humans to illustrate these processes. Evolutionary science has important advantages. Most of science deals with the microscopic world that we cannot see and invariably have difficulty understanding, but evolution deals with the macro-world in which we live and move. That invariably makes it much easier for the lay audience to appreciate, understand and enjoy. Evolution: What Everyone Needs to Know® takes a broad approach to evolution, dealing both with the core theory itself and its impact on different aspects of the world we live in, from the iconic debates of the nineteenth century, to viruses and superbugs, to human evolution and behavior.

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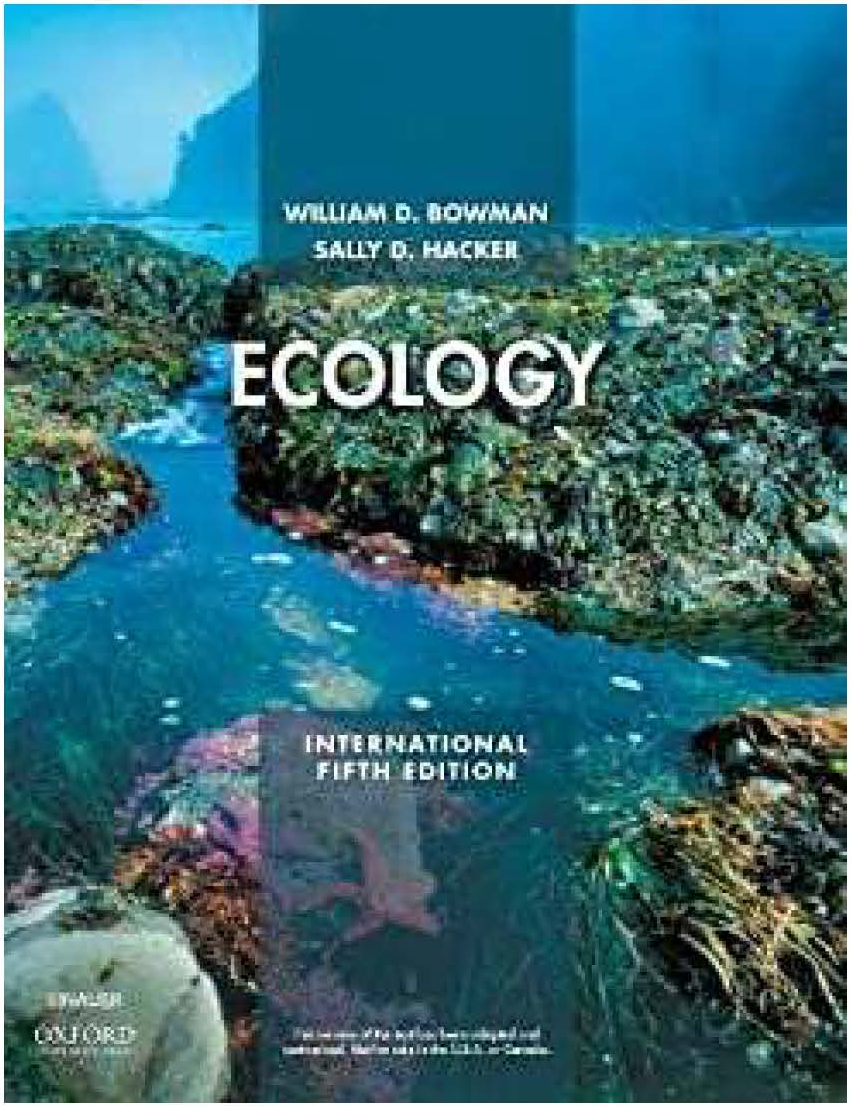
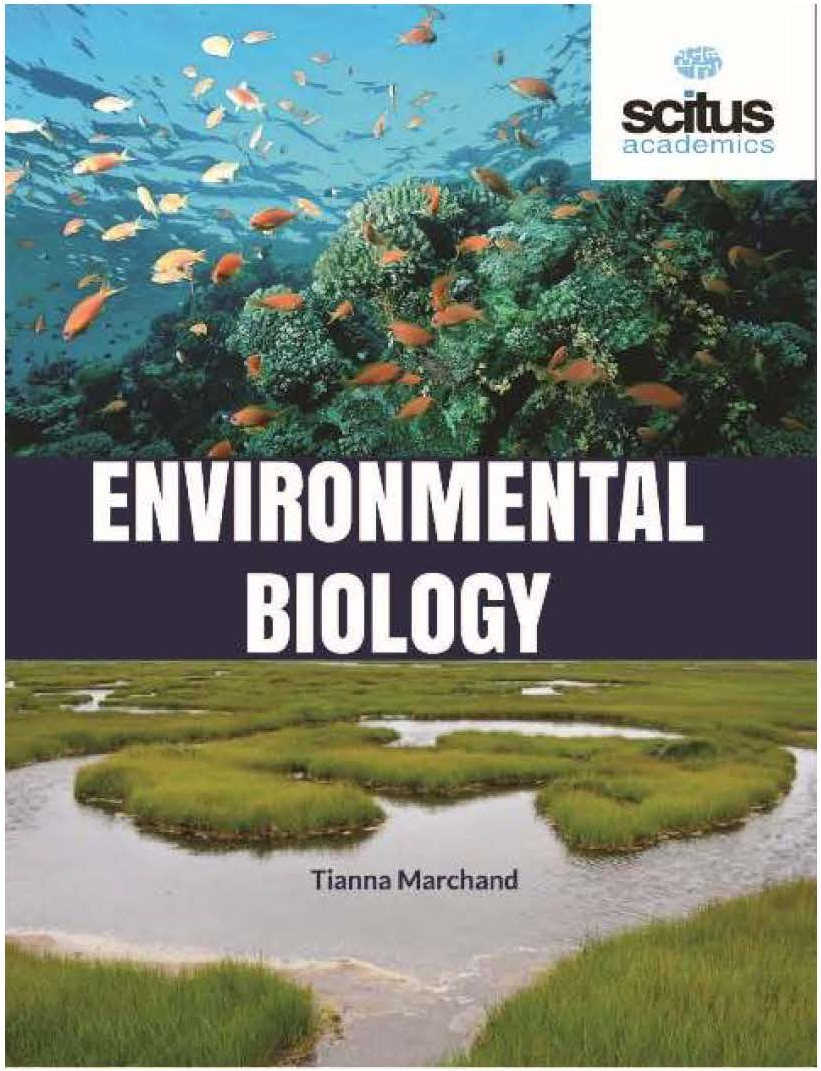


Ecology

Fifth Ed.

William D. Bowman
OXFORD
2020
9781605359281
$156.95 DL

Unit 1.Organisms and Their Environment / 2. The Physical Environment / 3. The Biosphere / 4. Coping with Environmental Variation: Temperature and Water / 5. Coping with Environmental Variation: Energy / Unit 2: Evolutionary Ecology / 6. Evolution and Ecology / 7. Life History / 8. Behavioral Ecology / Unit 3: Populations / 9. Population Distribution and Abundance / 10. Population Dynamics / 11. Population Growth and Regulation / Unit 4: Species Interactions / 12. Predation / 13. Parasitism / 14. Competition / 15. Mutualism and Commensalism / Unit 5: Communities / 16. The Nature of Communities / 17. Change in Communities / 18. Biogeography / 19. Species Diversity in Communities / Unit 6: Ecosystems / 20. Production / 21. Energy Flow and Food Webs / 22. Nutrient Supply and Cycling / Unit 7: Applied and Large-Scale Ecology / 23. Conservation Biology / 24. Landscape Ecology and Ecosystem



Environmental Biology

Tianna Marchand
SCITUS
2021
9781642234657
$179.00 DL

"Environmental Biology" is often considered to be synonymous with "ecology." Ecological studies thus concentrate on how individual species interact with their environment or how ecological communities or populations interact with their environment. Human activities have posed serious issues related to the environment and its conservation in recent decades. Air pollution, inadequate waste management, growing water scarcity, dropping groundwater levels, water pollution, forest protection and quality, loss of biodiversity and land/soil degradation, global climate change, deforestation, environmental degradation, depletion of resources and genetically modified food are the current environmental problems that make us vulnerable to disasters and tragedies. Current high levels of rising cause a precipitous decline in the biodiversity of the planet in the next century. Biodiversity loss will include some species that we know today. Although it is often difficult to predict which species will be extinguished, many are listed as endangered.

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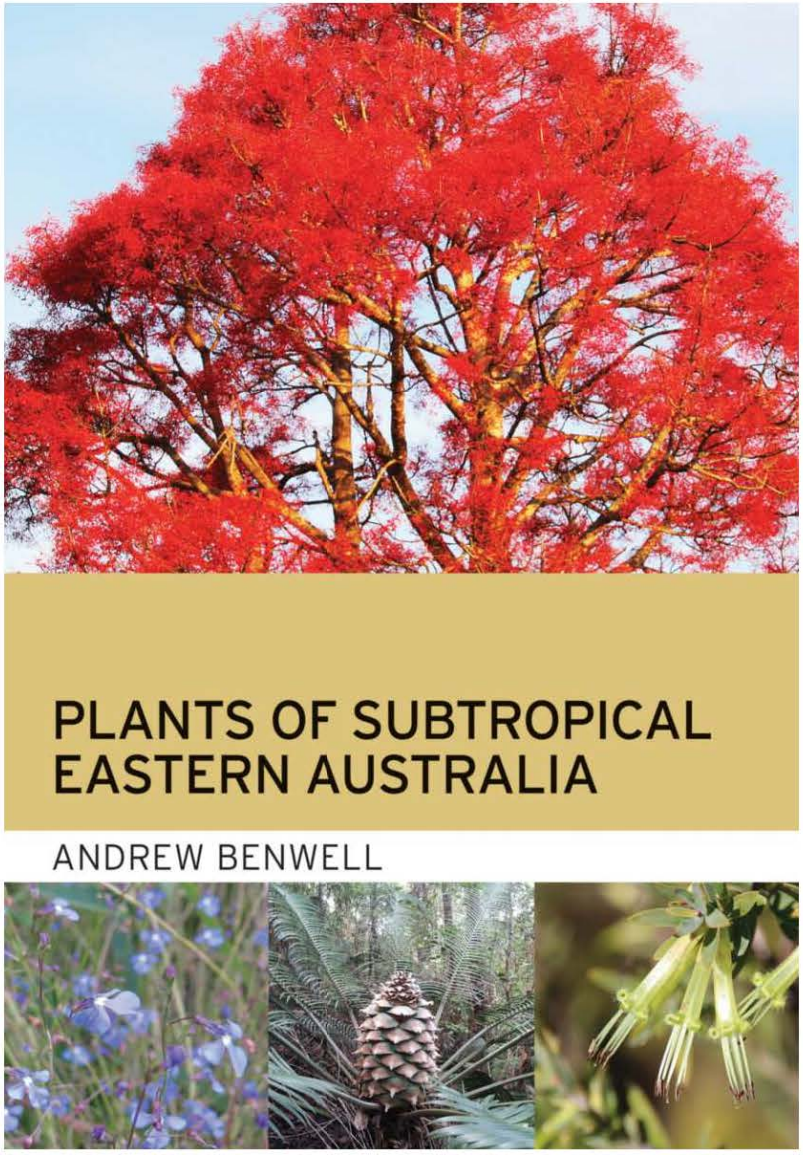

Plants of Subtropical Eastern Australia

Andrew Benwell, PhD
CSIRO Publishing
Paperback
March 2021
9781486313655
$ 35.95 DL

Plants of Subtropical Eastern Australia describes the rich flora of this biogeographically distinct region located on the east coast of Australia, covering the north coast of New South Wales and South-East Queensland. This guide presents a selection of common, threatened and ecologically significant plants found in the region's major vegetation habitats including rainforest, heathland, grassy forest, wetlands and rock outcrops.

More than 500 plants are featured, with photographs and descriptive features enabling the reader to identify any species encountered. Interesting biological, cultural and historical characteristics of each species are included, along with notes on the plant's biogeography and a map of its distribution.

Suitable for anyone with an interest in plant ecology and botany, Plants of Subtropical Eastern Australia is the definitive guide to this beautiful region of Australia and its unique flora.

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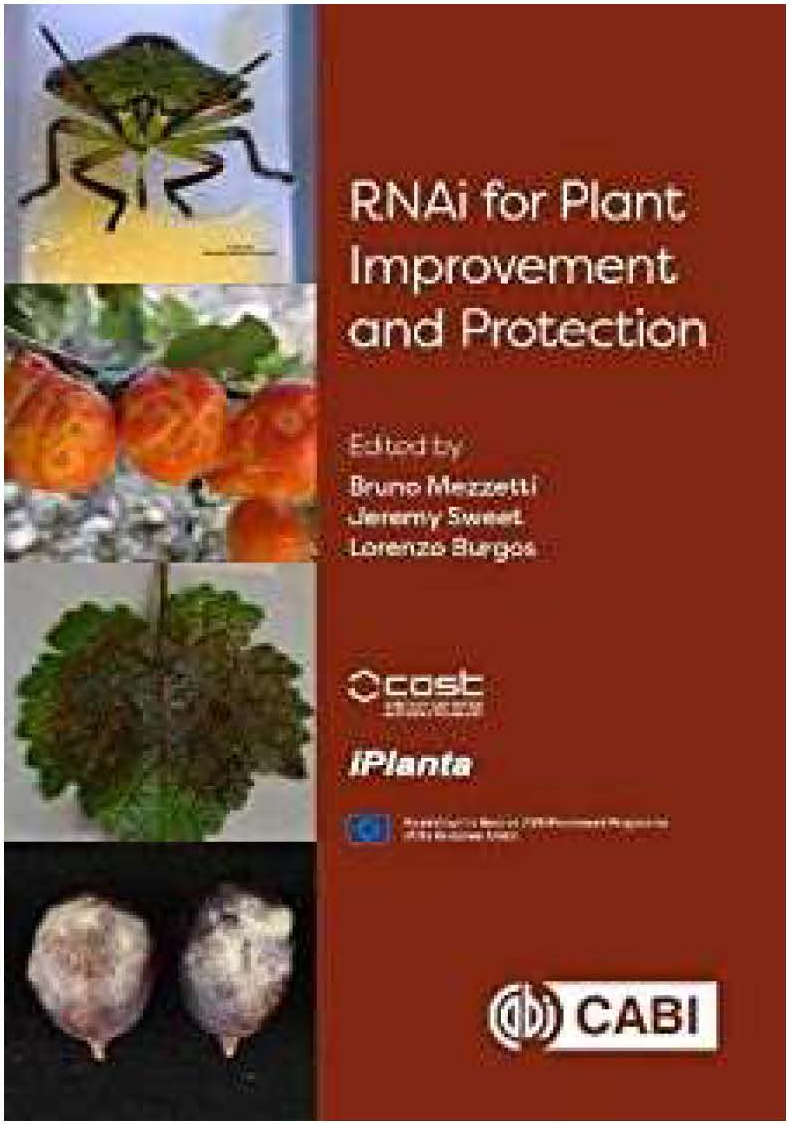

RNAi for Plant Improvement and Protection

Edited by Bruno Mezzetti, Jeremy Sweet and Lorenzo Burgos
CABI
Hardback
March 2021
9781789248890
$115.00 DL

RNA interference (RNAi) has the potential to make major contributions towards sustainable crop production and protection with minimal environmental impacts compared to other technologies. RNAi is being developed and exploited both within plants (i.e. host-induced gene silencing, HIGS) and/or as topical applications (e.g. spray-induced gene silencing, SIGS) for targeting pest and pathogen genes and for manipulating endogenous gene expression in plants. Chapters by international experts review current knowledge on RNAi, methods for developing RNAi systems in GM plants and applications for crop improvement, crop production and crop protection. Chapters examine both endogenous systems in GM plants and exogenous systems where interfering RNAs are applied to target plants, pests and pathogens. The biosafety of these different systems is examined and methods for risk assessment for food, feed and environmental safety are discussed. Finally aspects of the regulation of technologies exploiting RNAi and the socio-economic impacts of RNAi technologies are discussed.

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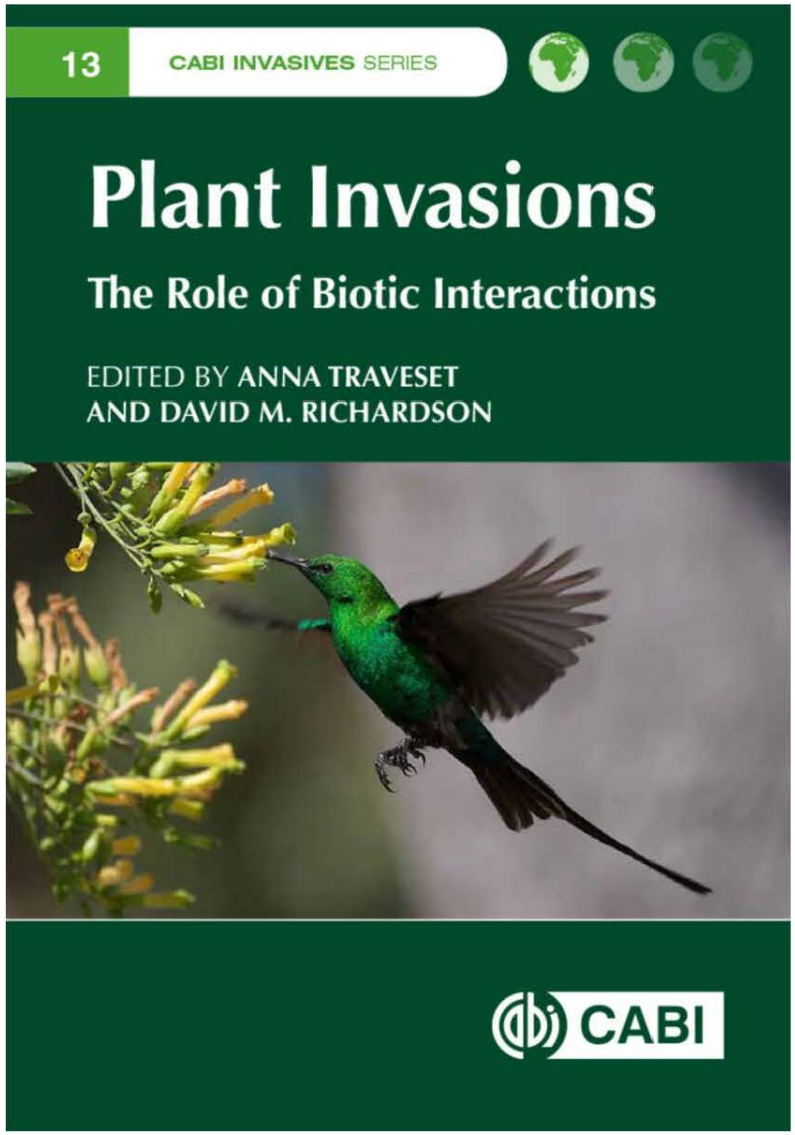

Plant Invasions

The Role of Biotic Interactions

Edited by Anna Traveset and David M. Richardson
CABI
Hardback
December 2020
9781789242171
$155.00

Despite many books on plant invasions, none has focused on the role of species interactions. This book is a comprehensive overview of how plant invasions are mediated by varied species interactions and how such invasions influence this important component of biodiversity which involves the interactions (the "glue") among a community's species. Besides highlighting relevant findings, the book digs deeply into new methodologies to understand species interactions in plant invasions and how this can improve management of invaded communities. The book covers:

- Main theories/hypotheses in plant invasion ecology that invoke species interactions
- Plant invasions promoted by mutualistic interactions and release from enemies
- Antagonistic interactions preventing or hindering plant invasions
- Consequences of plant invasions on native species interactions and ecosystem functioning
- The interaction network approach to understanding plant invasions
- Importance of considering species interactions in managing plant invasions

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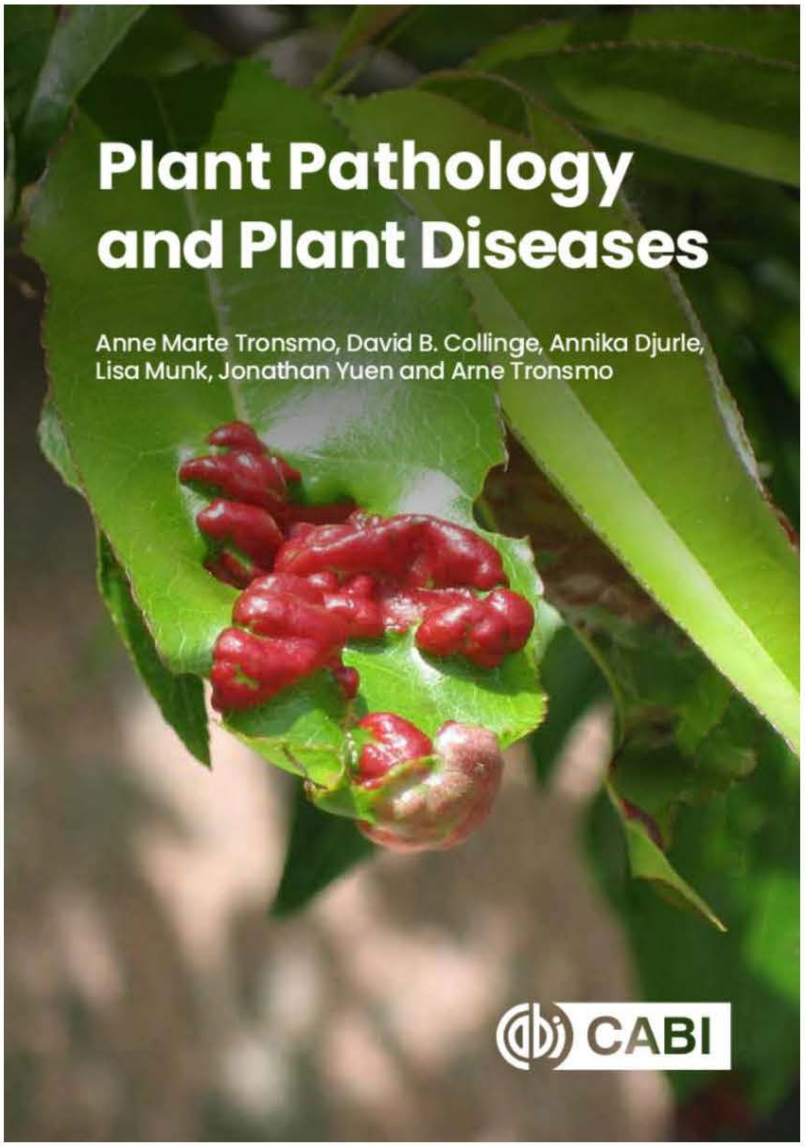

Plant Pathology and Plant Diseases

Anne Marte Tronsmo, David B. Collinge, Annika Djurle, Lisa Munk, Jonathan Yuen and Arne Tronsmo

CABI
Hardback
December 2020
9781789243185
$135.00 DL

This new textbook provides a comprehensive introduction to all aspect of plant diseases, including pathogens, plant-pathogen interactions, their management, and future perspectives. Plant diseases have limited crop production for as long as humans have engaged in agriculture and horticulture. With climate change, globalization and increasing awareness of the impact of pesticide use on the environment, today there is increased focus on food security as well as the various impacts of productive agriculture.

Written by a group of Nordic professors and teachers of plant pathology who have collaborated together for many years, the book gives expert and seamless coverage. Their approach to plant pathology is to describe the nature of the problem, the mechanisms behind it, the kinds of organisms which cause disease, the fundamental biology of plant-microbe interactions and the approaches used to control and manage disease.

The book is relevant for a worldwide audience, but offers a North European perspective in its selection of examples of plant disease.

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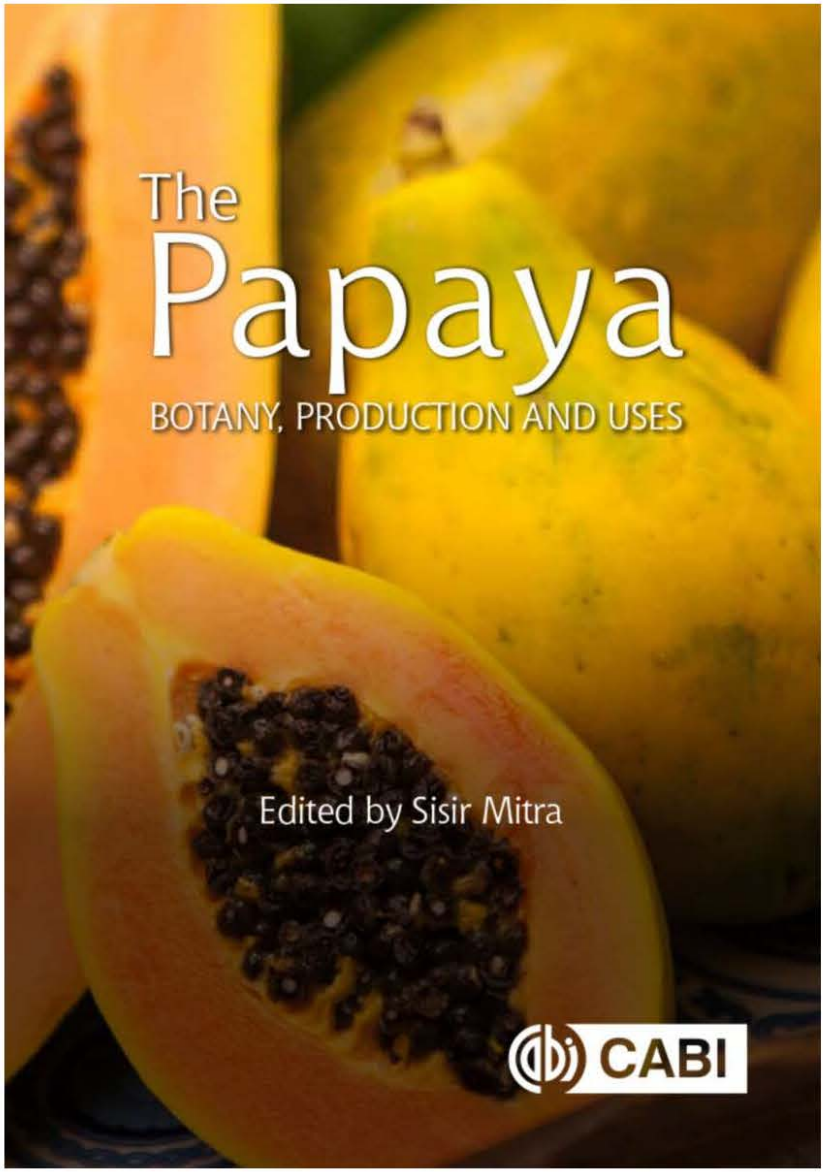

The Papaya

Botany, Production and Uses

Edited by Sisir Mitra
CABI
Hardback
October 2020
9781789241907
$130.00 DL

Papaya (Carica papaya) is an important and widely-cultivated tropical fruit, grown in more than 70 countries of the world. Global papaya production has grown significantly over the last few years, mainly as a result of increased production in India. Papaya has become an important agricultural export for developing countries where export revenues of the fruit provide a livelihood for thousands of people, especially in Asia and Latin America.

There have been a number of recent research developments with the potential to improve crop yields and quality. New research has contributed to our understanding of the crop environment, plant growth and physiology of tree and fruit development with implications for both breeding and cultivation. Analysis of the papaya genome promises new, faster breeding techniques to improved cultivars. These and other advances are helping to tackle disease like papaya ring spot viruses and major pests which still cause significant losses.

With contributions from international experts, the book presents the current state of knowledge concerning the history, physiology, culture and marketing of papaya throughout the world. It is an essential resource for researchers, growers and all those involved in the papaya industry.

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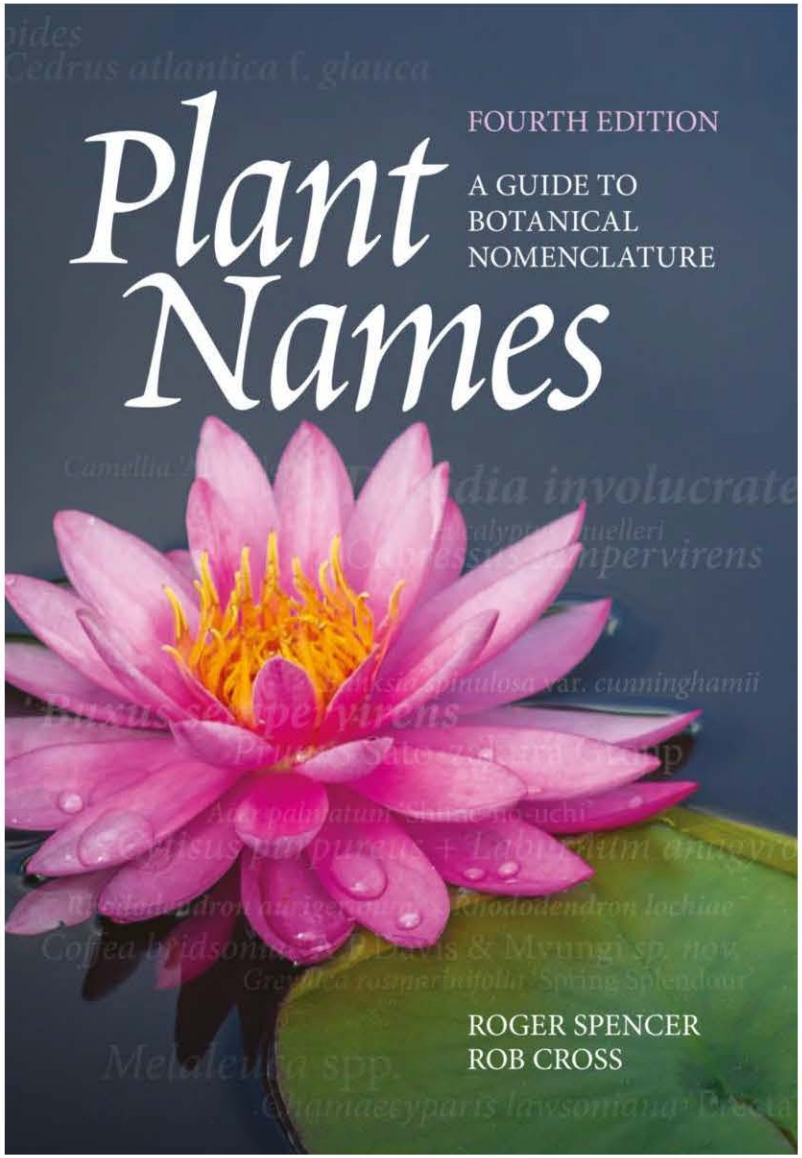


Plant Names

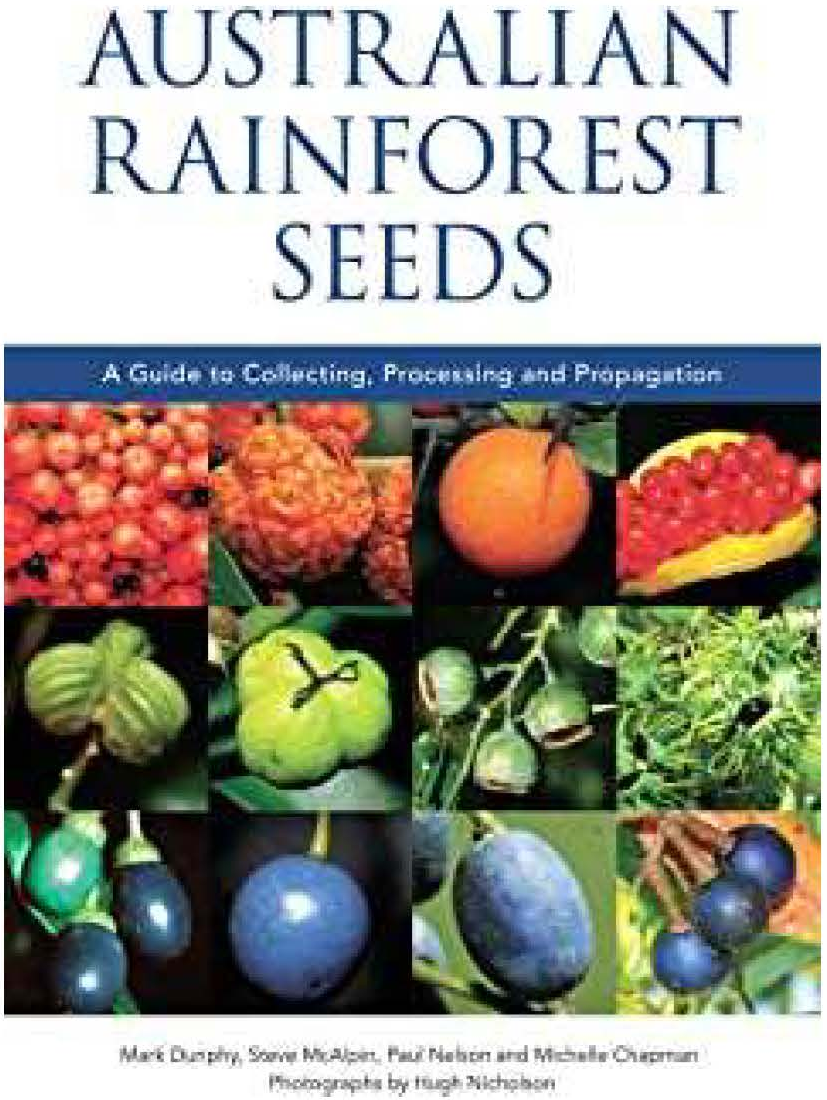
A Guide to Botanical Nomenclature

Edition 4

Roger Spencer and Rob Cross

CSIRO Publishing
Paperback
September 2020
9781486311446
$29.95 DL

Plant Names is an invaluable guide to the use of scientific, commercial, and common names for plants and the conventions for writing them. Written by horticultural botanists at the Royal Botanic Gardens Victoria, this book covers the naming of wild plants, plants modified by humans, why plant names change, their pronunciation and hints to help remember them, along with updated sections on trademarks and plant breeders' rights. The final section provides a detailed guide to resources useful to people using plant names.



Australian Rainforest Seeds

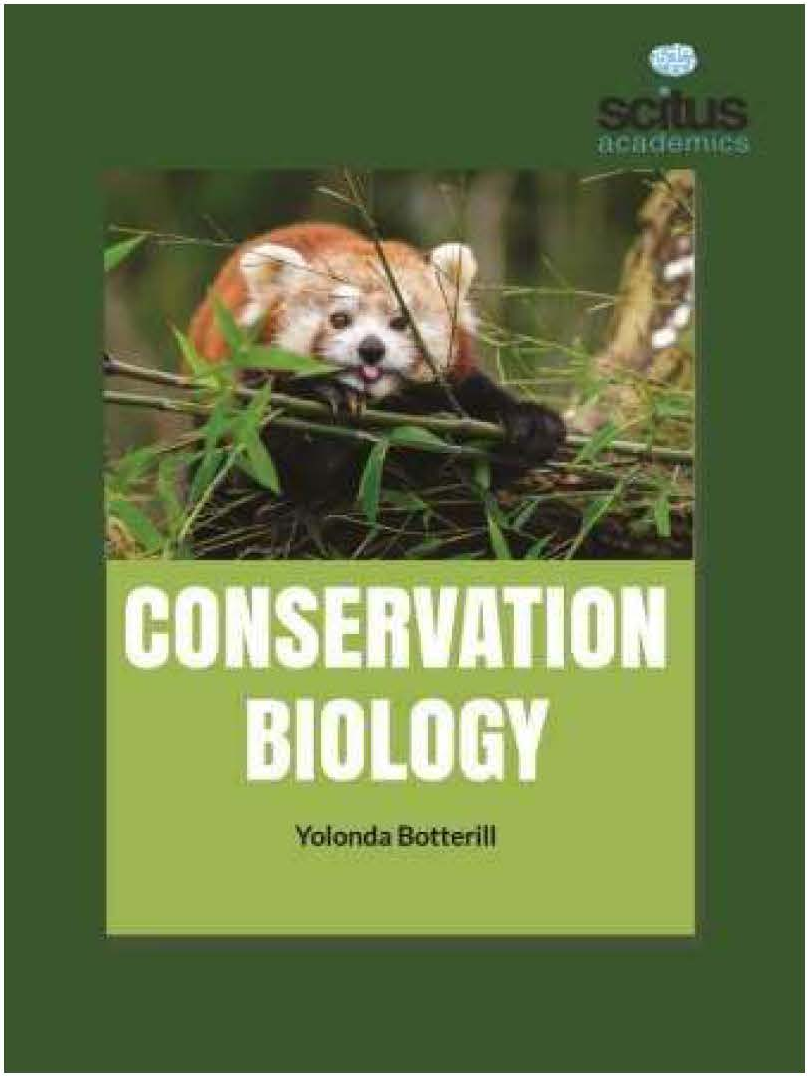
A Guide to Collecting, Processing and Propagation

Mark Dunphy, Steve McAlpin, Paul Nelson, Michelle Chapman and Hugh Nicholson

CSIRO Publishing
Paperback
September 2020
9781486311507
$39.95

This long-awaited guide to rainforest seed propagation unlocks the secrets to growing 300 rainforest species. Providing specific information on how to sustainably collect, process and germinate seeds, this user-friendly book supports a growing movement of rainforest restoration.

With invaluable information based on 30 years of research in northern New South Wales, users will find even difficult rainforest species delightfully easy to grow. Seeing a seed germinate, caring for the seedling and eventually planting the tree is deeply satisfying. And, in this time of widespread deforestation, millions of trees are needed for restoration and every tree counts. Whether you are growing one or one hundred thousand, why not start today?



Conservation Biology

Yolonda Botterill
9781642234640
SCITUS
2021
$179.00 DL

The book deals with the development of the idea of biodiversity and the emergence of conservation biology as a biology sub-discipline. It describes the relationship between conservation biology and activism that is developing to support the conservation of biodiversity. Biodiversity-ecosystem services are preserved by soil formation and protection, conservation and purification of water, maintenance of hydrological cycles, control of biochemical cycles, uptake and breakdown of pollutants and waste materials by decomposition, perseverance and legislation of natural environment in the world.

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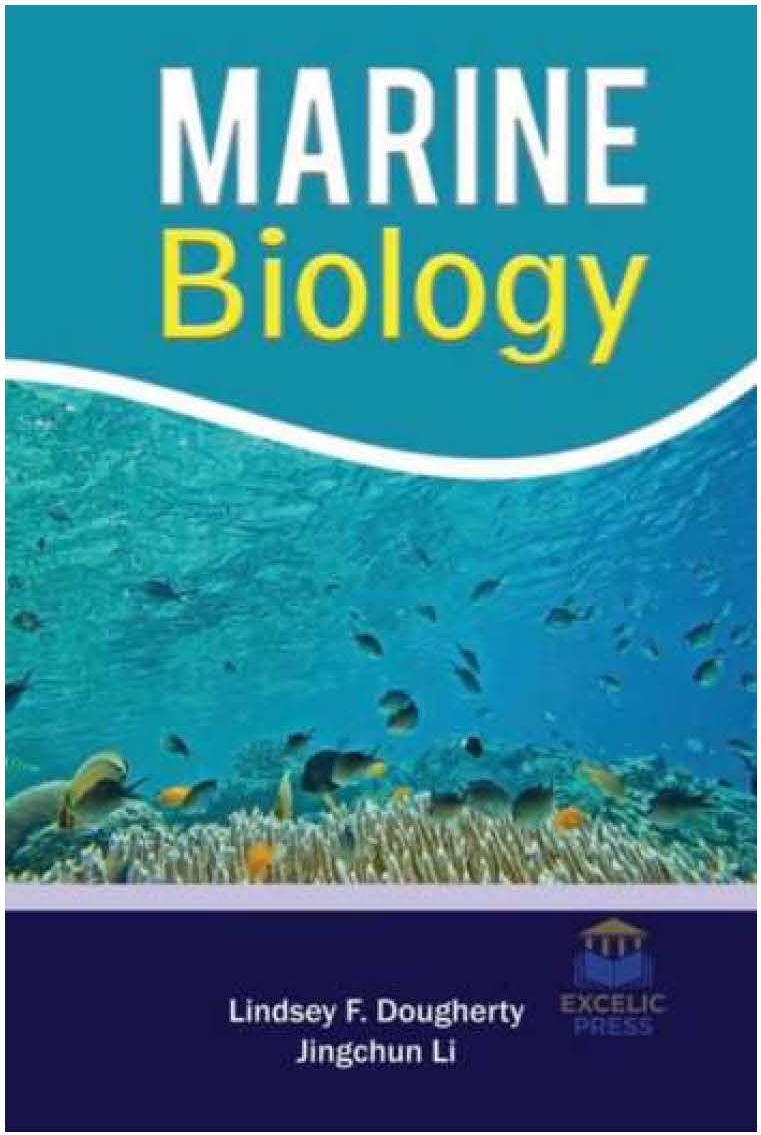
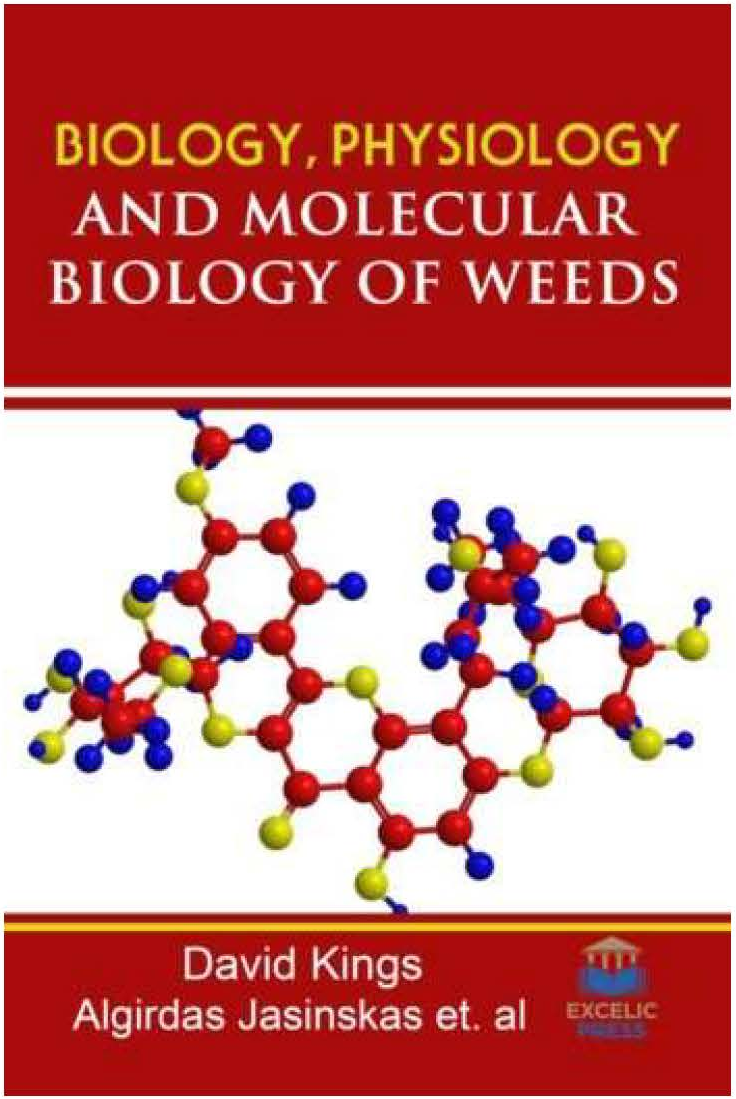


Marine Biology

Jingchun Li
9781642243659
SCITUS
2020
$ 180.00 DL

This book provides comprehensive and up-to-date reviews on all aspects of marine biology. The book starts with the concept that focuses on the food and feeding dynamics of Stolephorus commer-soni. The feeding dynamics of fishes is a crucial step in the management of stockpile of fish. The seasonal and spatial variations in the number of organisms that form major food sources for various species have a direct correlation with activities that these species perform, such as growth, condition, shoaling behavior, and migration.



Biology, Physiology And Molecular Biology Of Weeds

David Kings
9781642240610
EXCELIC
2019
$ 190.00 DL

Some plant species are particularly well adapted to environments disturbed by humans. Often such species are invasive and problematic, and thus are classified as weeds. Despite our best efforts to manage weeds, they continue to interfere with crop production. There is clearly much to learn about weeds, information that could aid in weed management and improve competitiveness in nonweedy species. The tools of molecular biology have been enlisted in ongoing efforts to manage weeds, most notably in the development and commercialization of crop plants tailored to resist certain herbicides. Molecular biology also has been used to gain a better understanding of how weeds compete and interact with neighboring plants, survive harsh environmental conditions, and evolve resistance to the herbicides used to control them.

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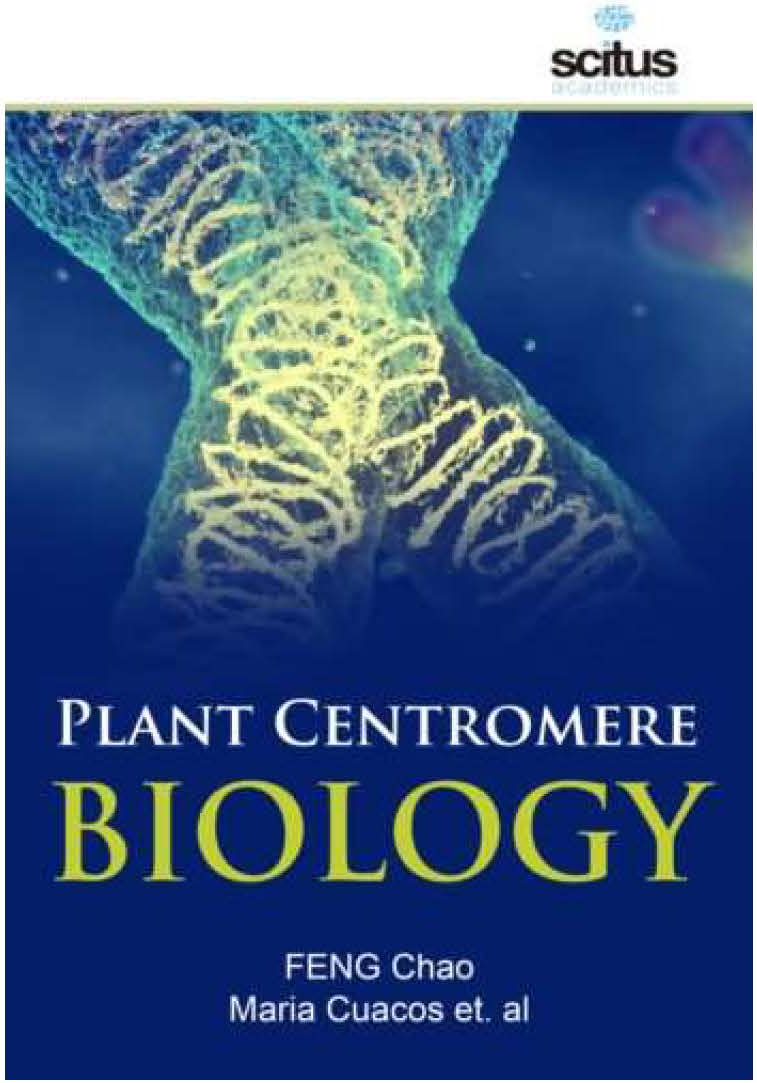

Plant Centromere Biology

FENG Chao
9781642230741
SCITUS
2019
$ 189.00 DL

Although plants were the organisms of choice in several classical centromere studies, molecular and biochemical studies of plant centromeres have lagged behind those in model animal species. However, in the past several years, several centromeric repetitive DNA elements have been isolated in plant species and their roles in centromere function have been demonstrated. Centromeres and telomeres are important chromosomal domains required for the proper separation of genetic material during both mitosis and meiosis. Centromeres are formed by centromeric DNA and a protein complex, the kinetochore, and are involved in sister chromatid cohesion, proper microtubule attachment, chromosome movement and cell cycle regulation. Centromeric DNA is composed of tandem repeats and/or transposable elements that have evolved fast and are therefore highly variable even among closely related species.Centromeric DNAs are one of the fastest evolving sequences in eukaryotic genomes. It is interesting that such an essential and functionally conserved chromosomal locus has so rapidly evolved with regards to its structure, extension and DNA sequence composition.

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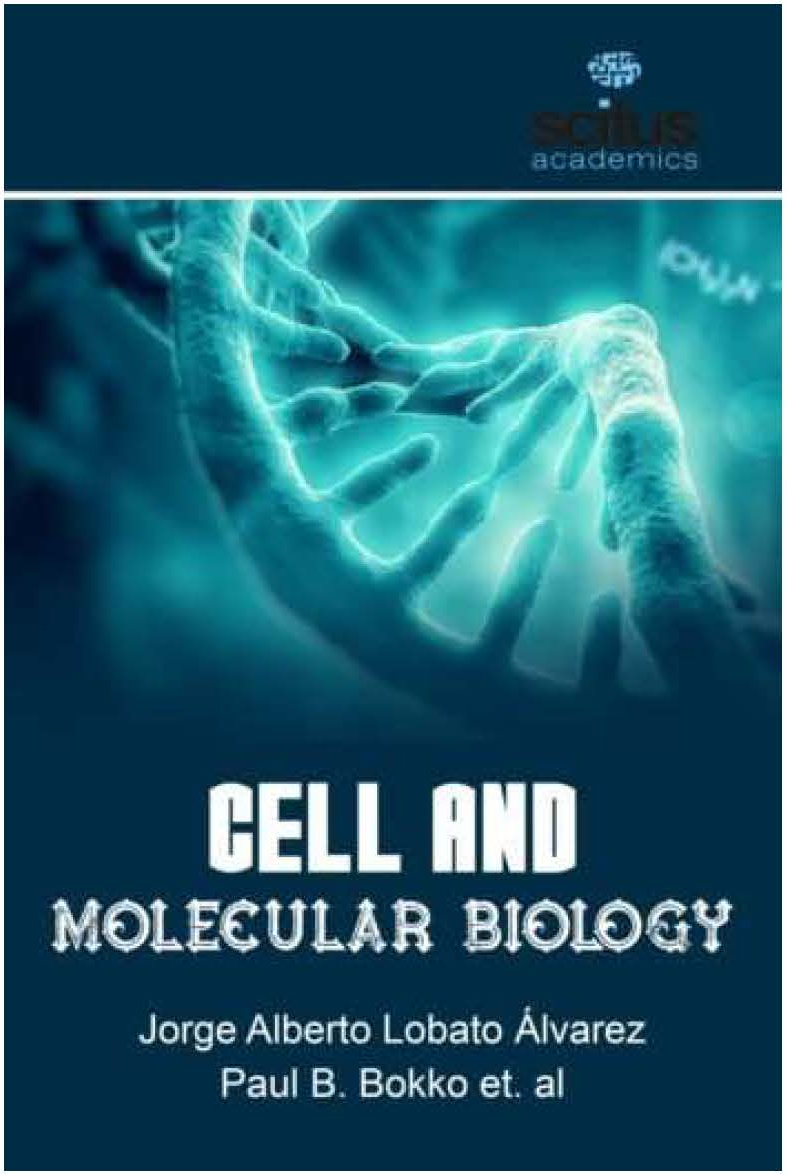

Cell And Molecular Biology

Paul B. Bokko
9781681179933
SCITUS
2019
$ 189.00 DL

Molecular Cell examines how the interaction of macromolecules gives rise to life, i.e., to the functioning of living organisms. The integration of molecular structure, function, and behavior can lead to a functional living cell. Molecular techniques have revolutionized our knowledge of cell and tissue function in both health and disease. We already have new and powerful treatments based on an understanding of communication between cells by messenger molecules called cytokines. Furthermore, there is great therapeutic promise in defining molecules which regulate cell adhesion, motility, proliferation, survival, and death. Understanding these areas is essential for medicine, pharmacology, biochemistry, virology, immunology, developmental biology, and in a number of the high-tech industries. From agriculture to the space program, fundamental information from these areas has had enormous impact on the changes that have occurred in our generation.

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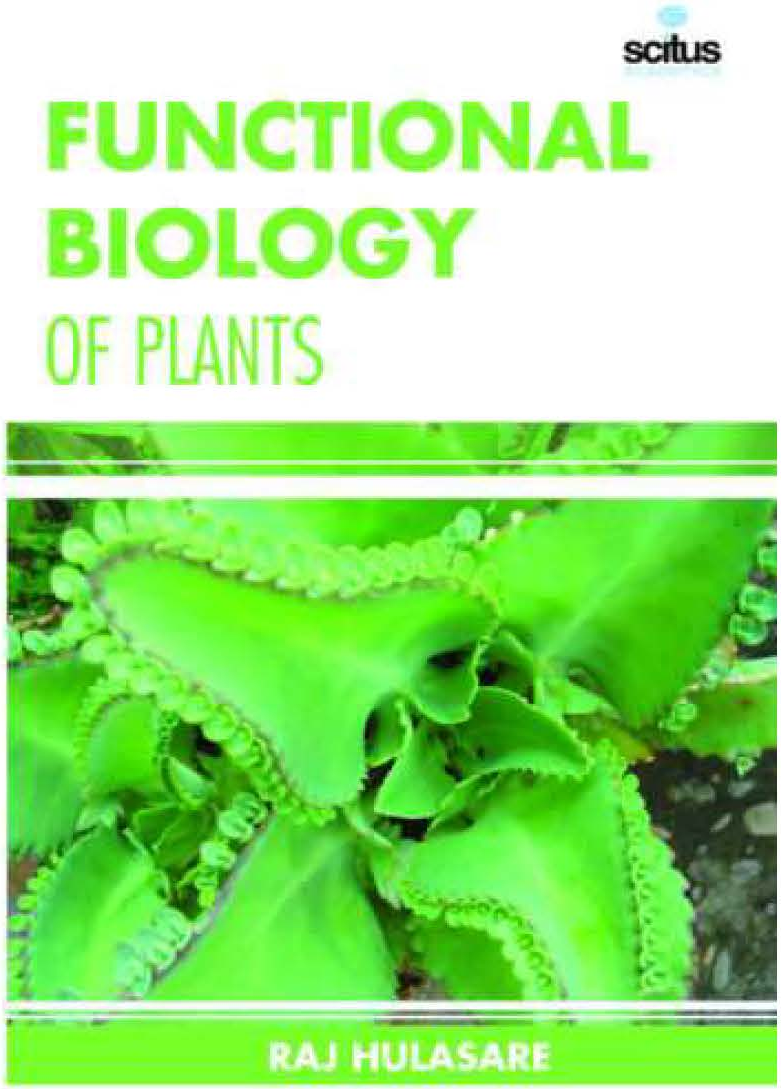

Functional Biology of Plants

Raj Hulasare
9781681170657
SCITUS
2016 $ 179.00 DL

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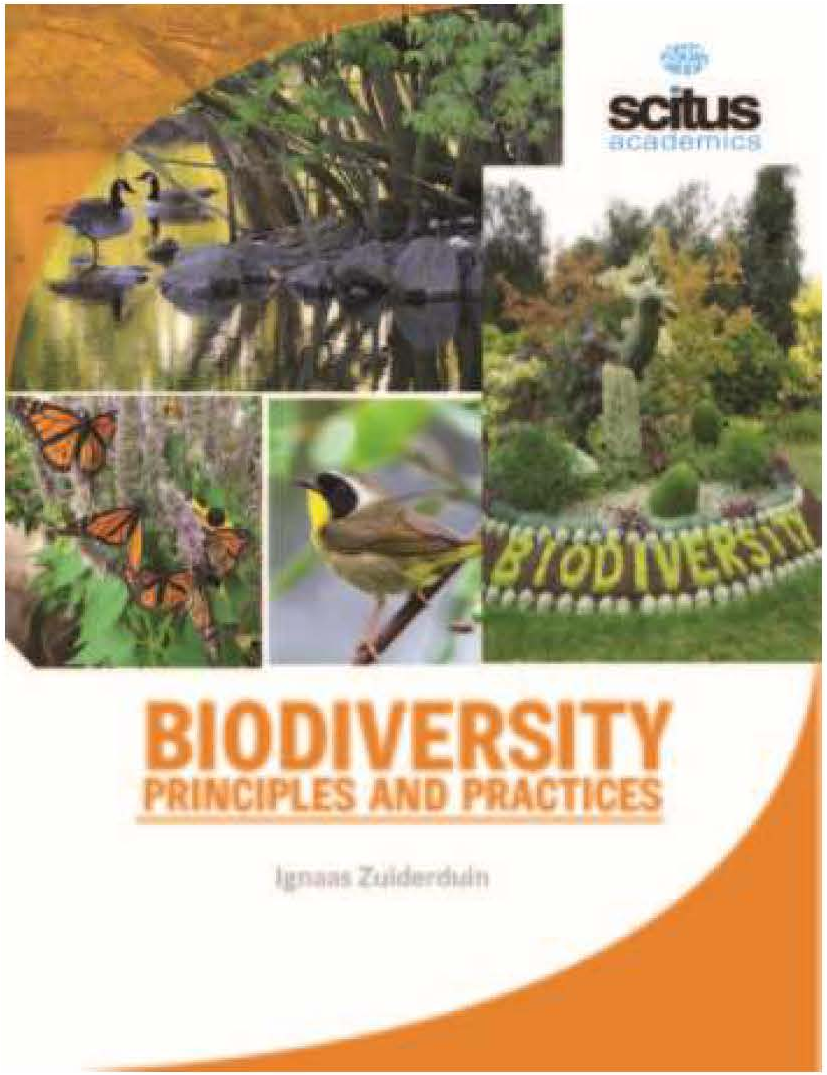

Biodiversity

Principles and Practices

Zuiderduin
9781642234565
SCITUS
2021
$ 179.00 DL

In this book, the text is organized into six units. It starts with an overview of biodiversity, in which you will know the basic concept, threats as well as conservation to biodiversity. Then, the readers are explained about the theory related to the taxonomy, which is concerned with describing, identifying, categorizing, and naming plants; and diversity in plants. The book makes them understand the various classification, ecology, and evolution of plants. Each step along the hierarchy is designed to narrow down the identification of a plant more precisely. The book also sheds light on the origin and evolution of birds, the adaptation of birds, the ecology of birds, the biology of birds. Moreover, it also emphasizes origin, classification, ecology and biology, of the amphibians, and conservation issues related to amphibian diversity. Finally, the book takes you through the ecology and conservation of reptiles.

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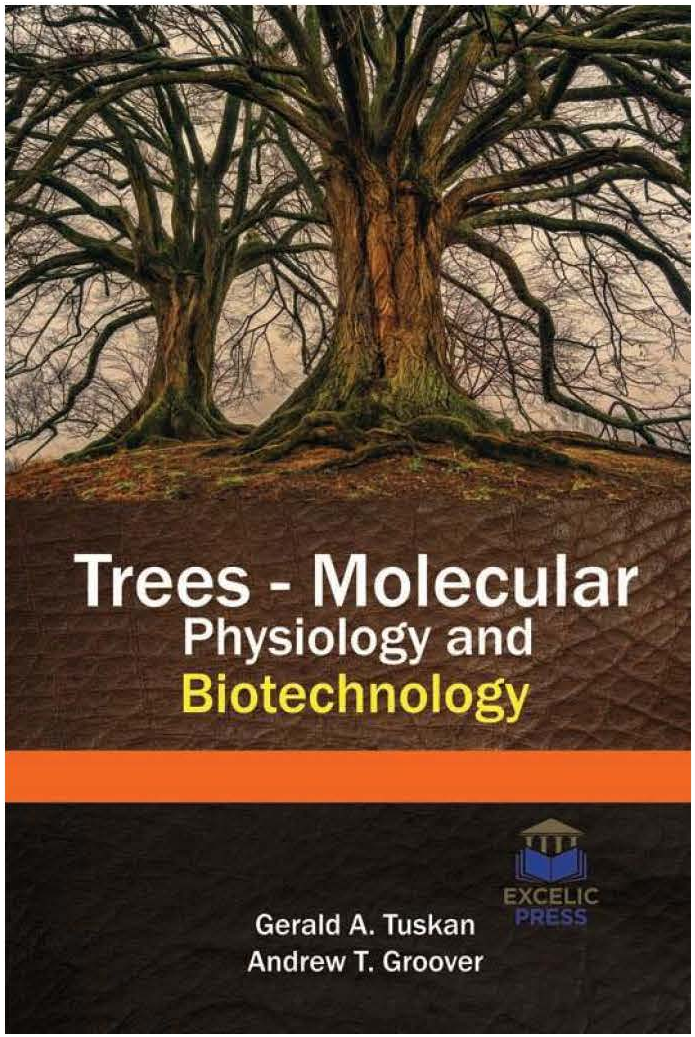
Trees – Molecular

Physiology And Biotechnology



Gerald A. Tuskan
9781642243888
EXCELIC
2020
$ 190.00 DL

The latest research has been working on models that can help predict breeding, defining speciation and local adaptation, detecting and characterizing somatic mutations, revealing the mechanisms of gender determination and flowering, and applications of systems of biology approach to model complex regulatory networks underlying quantitative traits New technologies are being explored, such as the single-molecule, long-read sequencing, as more and more woody plant species and genotypes within species are being sequenced. Thus, we can now use a comparative approach to understand the interesting biology of large woody plants. Understanding of molecular physiology and biotechnology is opening the way for genetic control of trees; this book provides the latest and wide-ranging information about tree characterization, biological understanding, and development through biotechnological and molecular tools. The book goes on to discuss online resources available for these genomes and also provide resources that will help us compare other angiosperm species. The availability and research value of the different genomes of hardwood trees will be increased with the near-term technologies and analytics that will be available. This book also goes into the response of plant cell walls to various abiotic stresses such as drought, flooding, heat, cold, salt, heavy metals, light, and air pollutants. The effects of these stress are discussed at various levels: physiological (morphogenic), transcriptomic, proteomic and biochemical levels. Even though we have learned a lot about the consequences of a deficit of water on cell wall structures and dynamics, a lot still remains to be studied before key cell wall polymers can be targeted to produce useful results in engineering drought-resistant crops. This book summarizes the most recent advancements in the effects that these abiotic stresses (drought, flooding, heat, cold, salinity, metals, light irradiance, and air pollutants) have on the metabolism of the primary and secondary cell walls.

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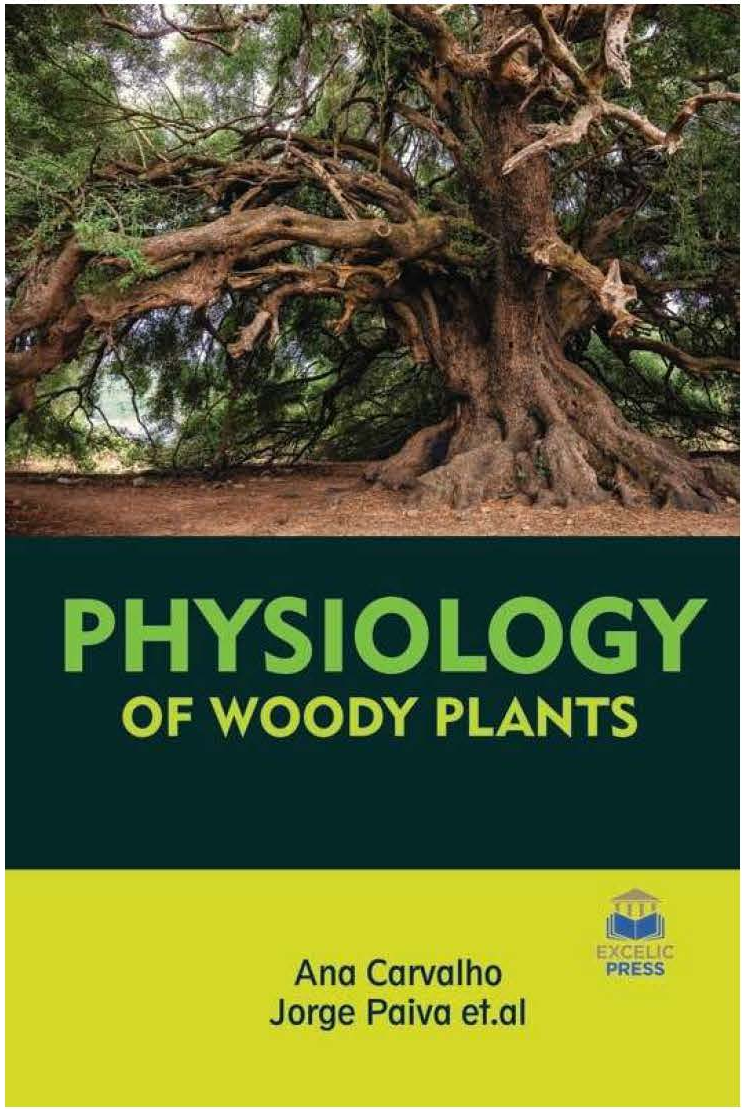

Physiology Of Woody Plants

Jorge Paiva
9781642244366
EXCELIC
2020
$ 180.00 DL

The present book will also provide an update on the physiological and molecular responses and tolerance mechanisms to B deficiency in woody plants. Emphasis is placed on the roles of B reserves that are additionally vital for tolerance to B deficiency in trees than in non-woody plants and therefore, the potential physiological and molecular mechanisms of differential B potency in trees.

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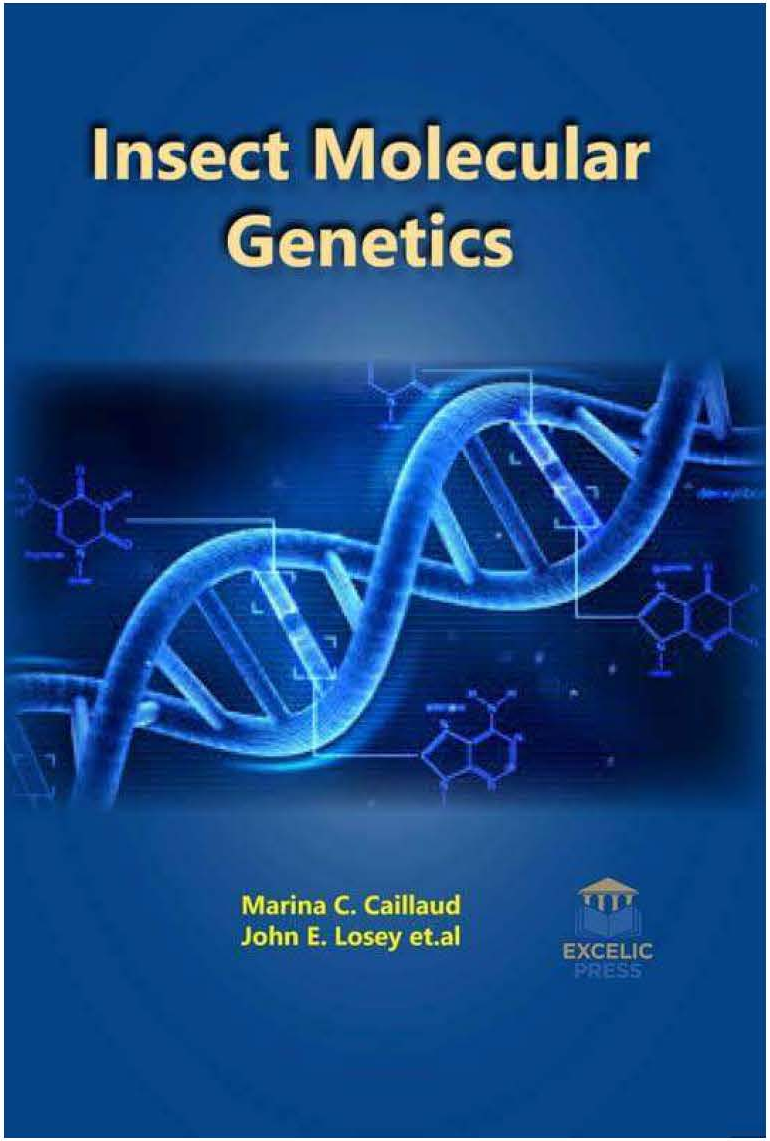

Insect Molecular Genetics

John E. Losey
9781642243239
EXCELIC
$ 180.00 DL

This book discusses recent contributions focusing on insect molecular genetics written by eminent experts in their respective fields. This book describes and evaluates studies in this field and discusses the investigations including genetic and molecular approaches used on other insect species. The genetic basis of color polymorphism is explored in the pea aphid, Acyrthosiphon pisum (Harris) (Homoptera: Sternorrhyncha), in which two color morphs have been described (pink or green). Color polymorphisms provide some of the best-characterized examples of functionally and ecologically important polymorphisms. In many animal taxa, color polymorphism differentially affects the fitness of individuals in a species. Some color morphs may, for instance, be more cryptic than others and therefore harder for predators to locate visually. Molecular cloning and expression of three polygalacturonase cDNAs from the tarnished plant bug, Lygus lineolaris. Molecular genetic markers reveal differences between genotypes according to the presence of alleles (the same or different) at target loci. Ecdysteroids play a pivotal role in development, growth, molt, and in the control of reproduction in the adult stage. EcR belongs to a molecular target of the ecdysteroids in arthropods, usually, ecdysteroids play roles through EcR. The expression of the whole body and gonad at the different development stages of TeEcR but different levels was detected in this book.

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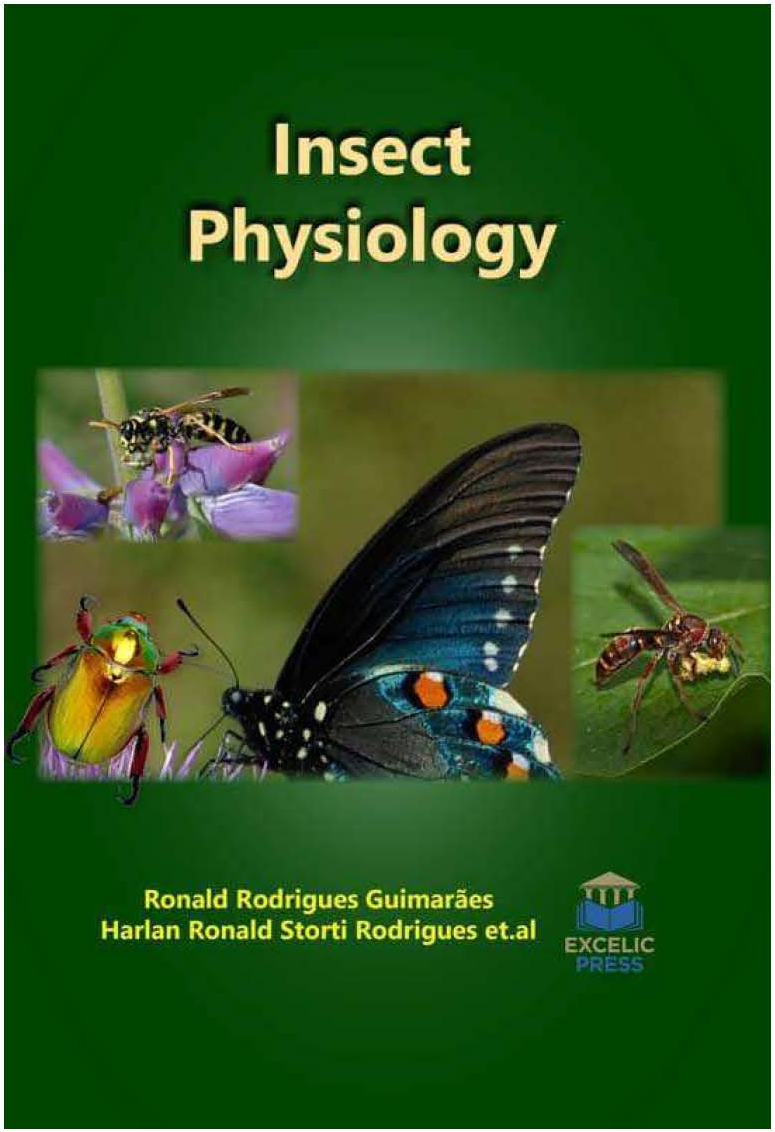

Insect Physiology

Rodrigues Guimarães
9781642243246
EXCELIC
2020
$ 190.00 DL

This book covers the cutting edge and comprehensive information on all aspects of insect physiology. The book opens with a study that covers state of the art information on taxonomy, morphological data, distribution, and bionomy on most in South America. Insects share advanced interactions with mites and fungi that vary from obligate Mutualism to antagonistic relationships. These Multitronic interactions typically end in changes to the host surroundings and population dynamics of the insect. In this book, we provide a detailed review of specific beetle-fungal and mite-fungal associations, mutualistic and antagonistic effects of these fungal relations, and ecological and evolutionary consequences of beetle-fungal-mite relationships within the host complex.

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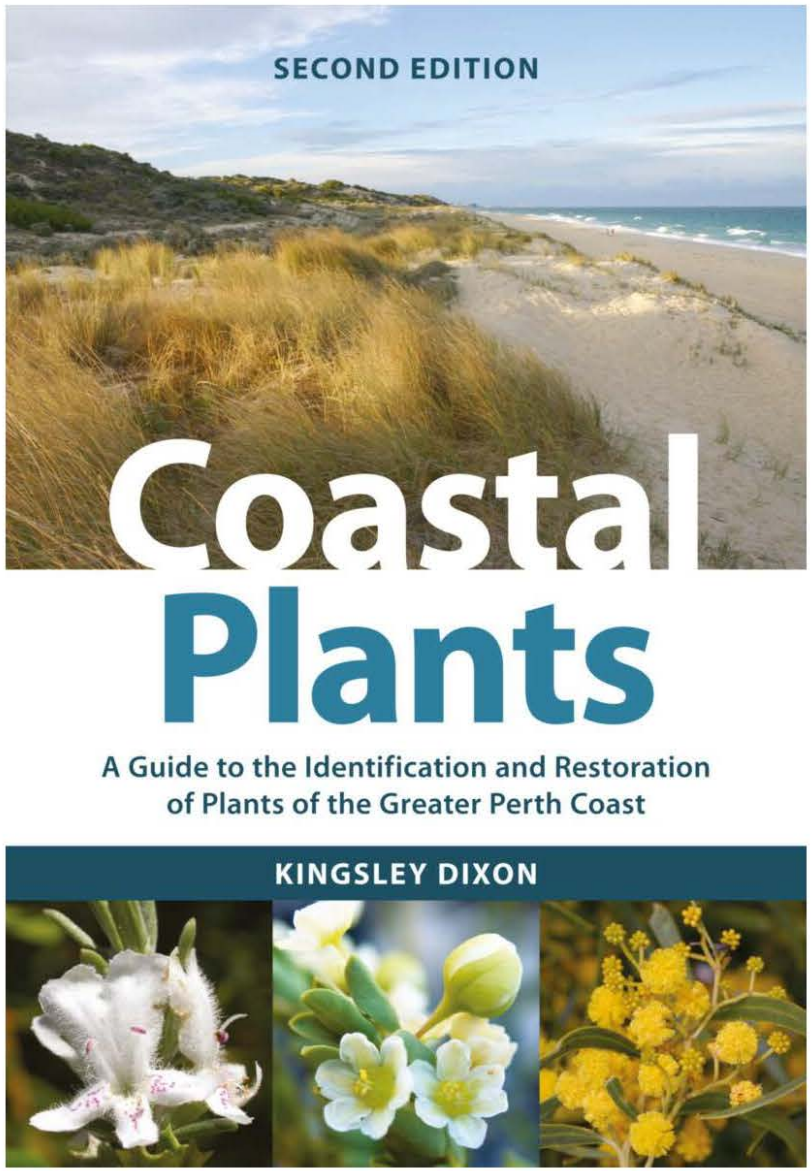


Coastal Plants

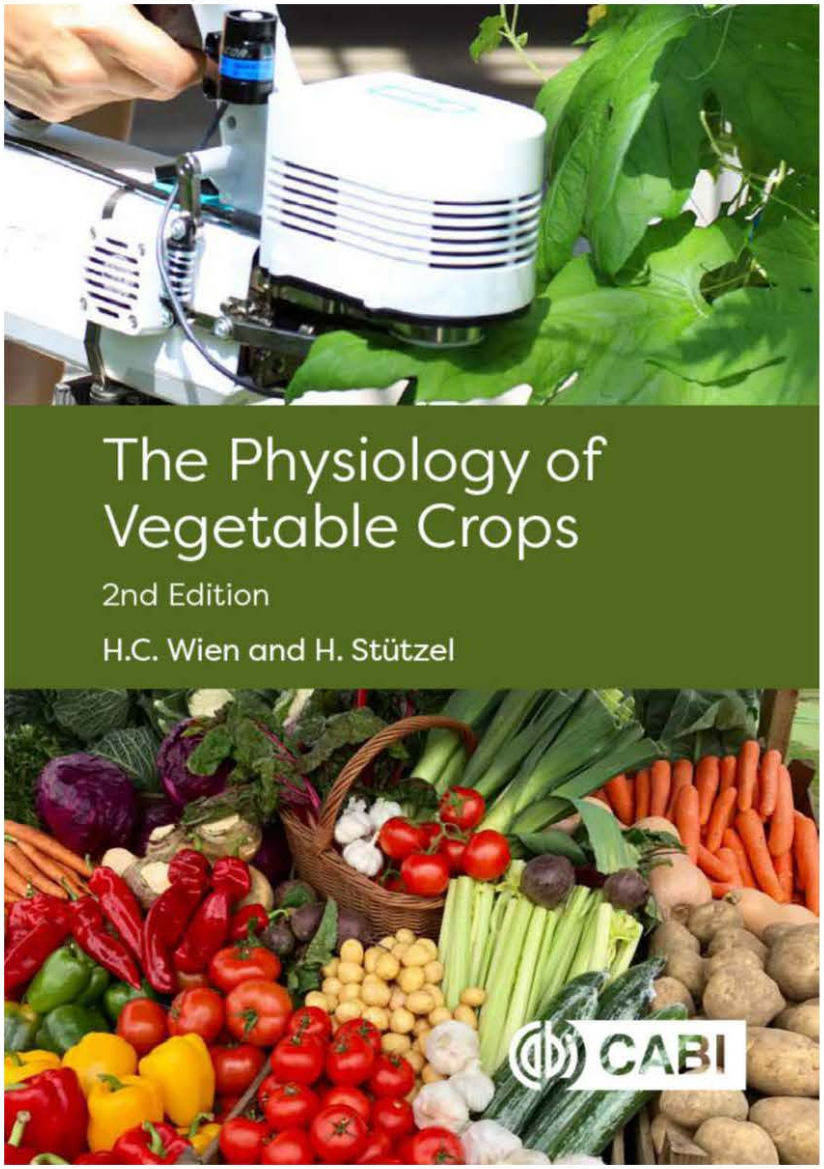
A Guide to the Identification and Restoration of Plants of the Greater Perth Coast

Edition 2

Kingsley W. Dixon
CSIRO Publishing
Paperback
August 2020
9781486311378
$29.95 DL

The greater Perth coast is a biodiverse and ecologically vulnerable region, with its unique native plant species threatened by clearing, invasive species, fire and climate change. This second edition of Coastal Plants has been updated and expanded to provide a definitive guide to 128 of the most common plants of the Perth coastal region. It includes the key species used in coastal restoration, along with important weeds. The description of each species is accompanied by a distribution map and diagnostic photographs of the whole plant, flowers, seeds and fruits. The book also contains introductory chapters on the biology and ecology of the coastal plants, their biogeography, and practical approaches to the restoration of coastal dune vegetation.

Coastal Plants is distinctive in its focus on restoration, which makes it valuable for community groups and individuals interested or involved in coastal natural history or restoration activities.



Physiology of Vegetable Crops

Edition 2

Edited by H. Christian Wien and Hartmut Stützel
CABI
Hardback
May 2020
9781786393777
$210.00 DL

Completely updated and revised, this bestselling book continues to explain the growth and developmental processes involved in the formation of vegetables. Since the publication of the successful first edition significant discoveries--particularly in the area of molecular biology--have deepened and broadened our understanding of these processes. This new edition brings the topic up-to-date and is presented over two sections: the first provides general knowledge on germination, transplanting, flowering, the effects of stress and modelling, while the second section details the physiology of specific crops or crop groups.

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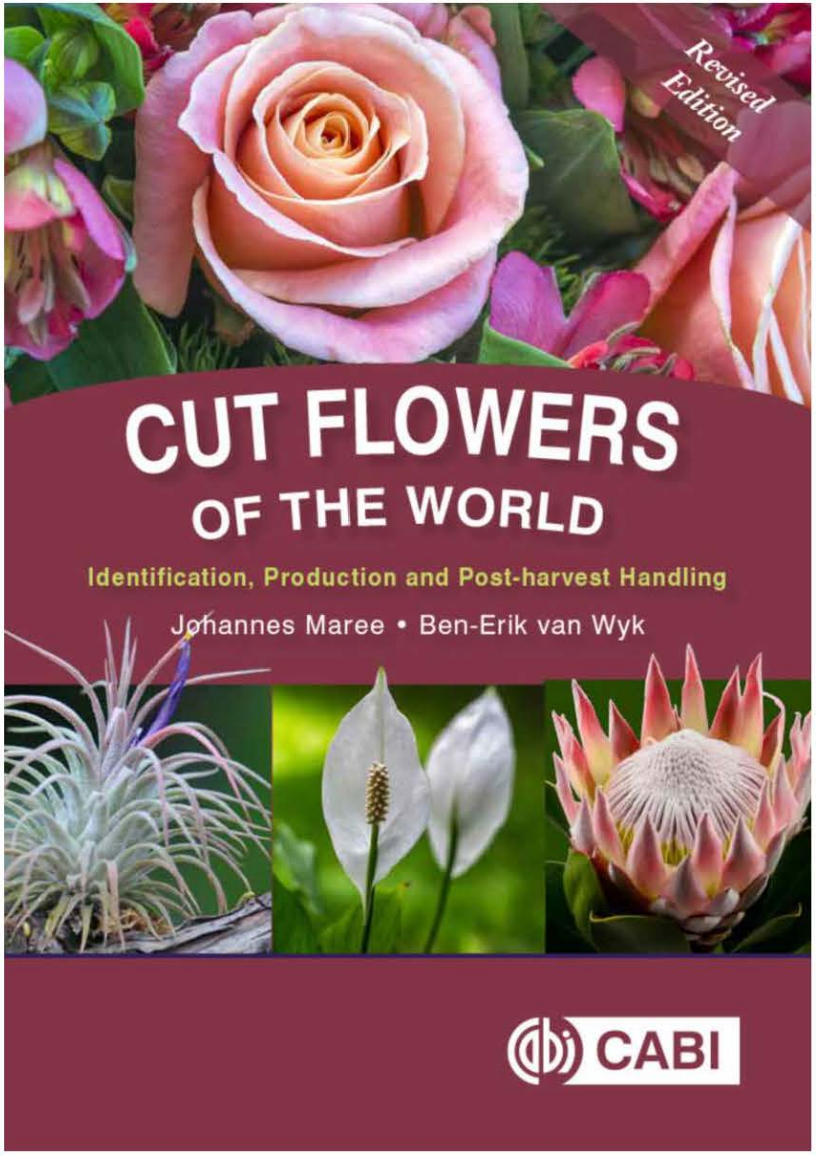


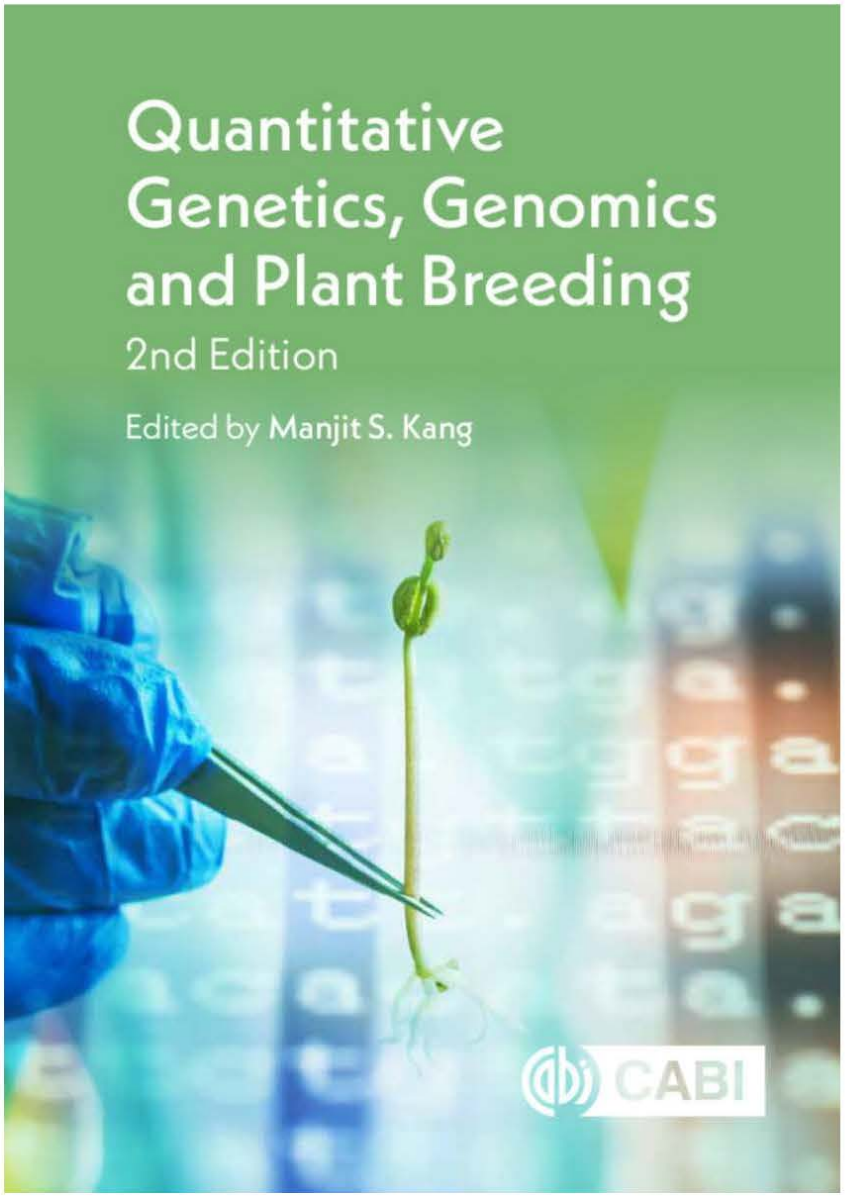
Cut Flowers of the World

Identification, Production and Post-harvest Handling

Johannes Maree and Ben-Erik van Wyk
CABI
Hardback
April 2020
9781789241334
$55.00 DL

This full-color photographic guide describes and illustrates over 350 different species of widely used cut flowers and foliage plants. Cut Flowers of the World is a user-friendly but scientifically accurate, quick reference guide to the most important commercial cut flowers, foliage greens and potted flowers that are sold in florist shops all over the world. This second edition has been expanded to include updated cultivar photos, and a new section on the practical aspects of cut flower production.

For each flower, the following information is given: description of the plant; geographical origin; historical overview; cultivation; properties such as colors, scent and vase life; quality criteria (how to select for quality); and the proper care and handling of the flowers. Also included are introductory chapters on basic aspects such as cultivation methods, harvesting and shipping techniques, cultivar development, and modern trends in marketing.



Quantitative Genetics, Genomics and Plant Breeding

Edition 2

Edited by Manjit S. Kang
CABI
Hardback
May 2020
9781789240214
$175.00 DL

This book presents state-of-the-art, authoritative chapters on contemporary issues in the broad areas of quantitative genetics, genomics and plant breeding. Part 1 emphasizes the application of genomics, and genome and epigenome editing techniques, in plant breeding; bioinformatics; quantitative trait loci mapping; and the latest approaches of examining and exploiting genotype-environment interactions. Part 2 represents the intersection of breeding, genetics and genomics. This section describes the use of cutting-edge molecular breeding and quantitative genetics techniques in wheat, rice, maize, root and tuber crops and pearl millet. Overall, the book focuses on using genomic information to help evaluate traits that can combat biotic/abiotic stresses, genome-wide association mapping, high-throughput genotyping/phenotyping, biofortification, use of big data, orphan crops, and gene editing techniques. The examples featured are taken from across crop science research and cover a wide geographical base.

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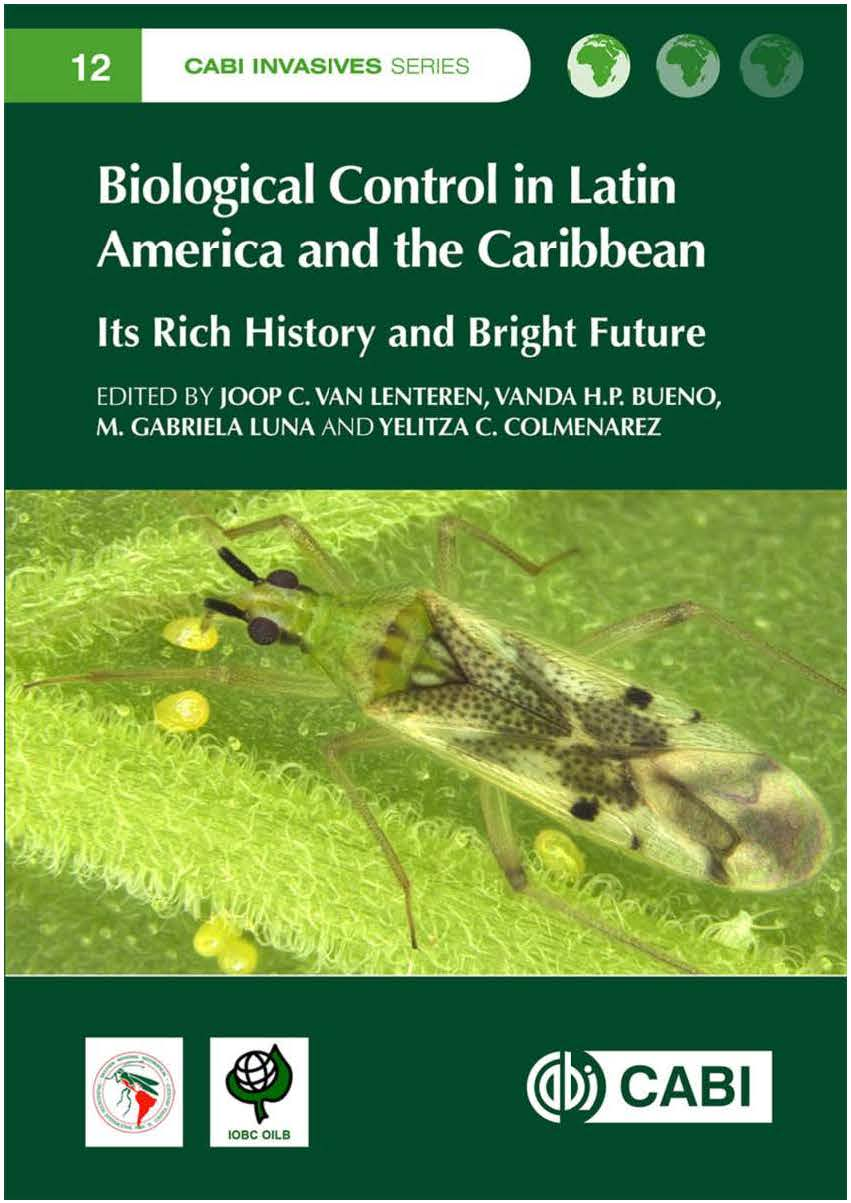

Biological Control in Latin America and the Caribbean

Its Rich History and Bright Future

Edited by J. C. van Lenteren, Vanda H.P. Bueno, Maria Gabriela Luna and Yelitza Colmenarez
CABI
Hardback
January 2020
9781789242430
$225.00 DL

The book summarizes the history of biological control in Latin America and the Caribbean. Few publications provide historical detail and the records are, therefore, fragmented until now. By bringing information together in this book, we offer a more complete picture of important developments in biological control on this continent. There are a wealth of text, tables and references about the history of such projects, and which were successful and which failed. This will help plan future biocontrol projects. An overview is provided of the current situation in biological control for many Latin American and Caribbean countries, revealing an astonishing level of practical biological control applied in the region, making it the largest area under biological control worldwide. The final part describes new developments and speculates about the future of biological control in Latin America and the Caribbean.

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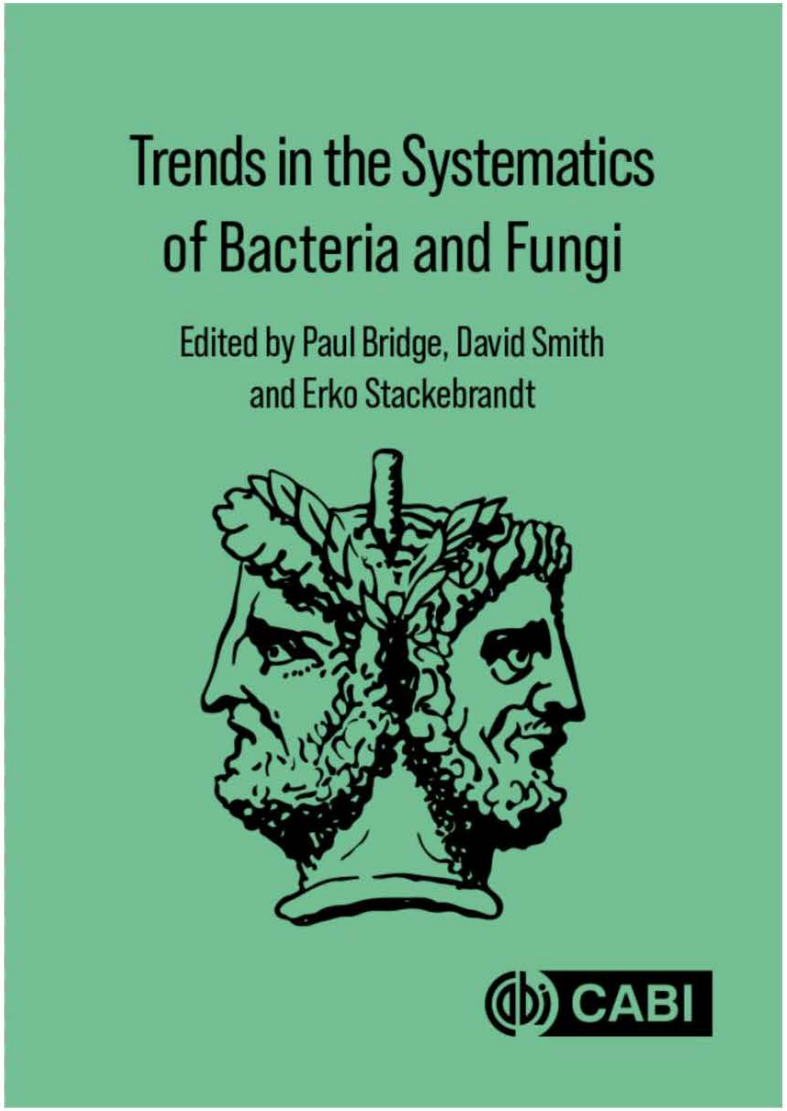

Trends in the Systematics of Bacteria and Fungi

Edited by Paul D. Bridge, David Smith and Erko Stackebrandt
CABI
Hardback
December 2020
9781789244984
$155.00 DL

Methods in microbial systematics have developed and changed significantly in the last 40 years. This has resulted in considerable change in both the defining of microbial species and the methods required to make reliable identifications. Developments in information technology have enabled ready access to vast amounts of new and historic data online. Establishing both the relevance and the most appropriate use of this data is now a major consideration when undertaking identifications and systematic research. This book provides some insights into how current methods and resources are being used in microbial systematics, together with some thoughts and suggestions as to how both methodologies and concepts may develop in the future.

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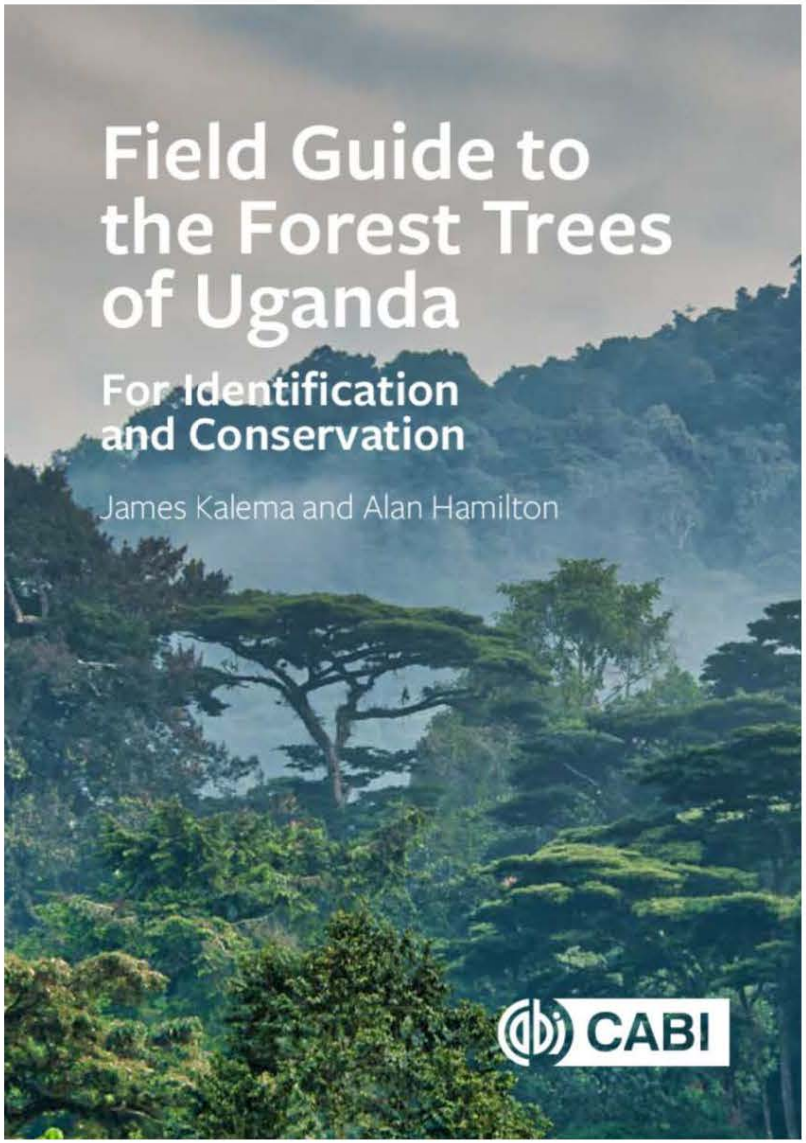

Field Guide to the Forest Trees of Uganda

For Identification and Conservation

James Kalema and Alan Hamilton
CABI
Hardback
August 2020
9781789245271
$85.00 DL

This book is a guide for the identification of the indigenous forest trees of Uganda. It will be useful for those who wish to contribute towards the conservation of the forests or to plant indigenous trees. Information is provided on how to propagate and cultivate about 80 of the most valuable species.

Indigenous trees provide numerous resources useful for welfare and development. They include many types of timber and non-timber forest products, such as craft materials, foods and medicines. The proximity of indigenous forest helps to moderate the local climate, making it more suitable for agriculture. Indigenous forests protect springs, therefore safeguarding water supplies more effectively than exotic trees such as pines and eucalyptus.

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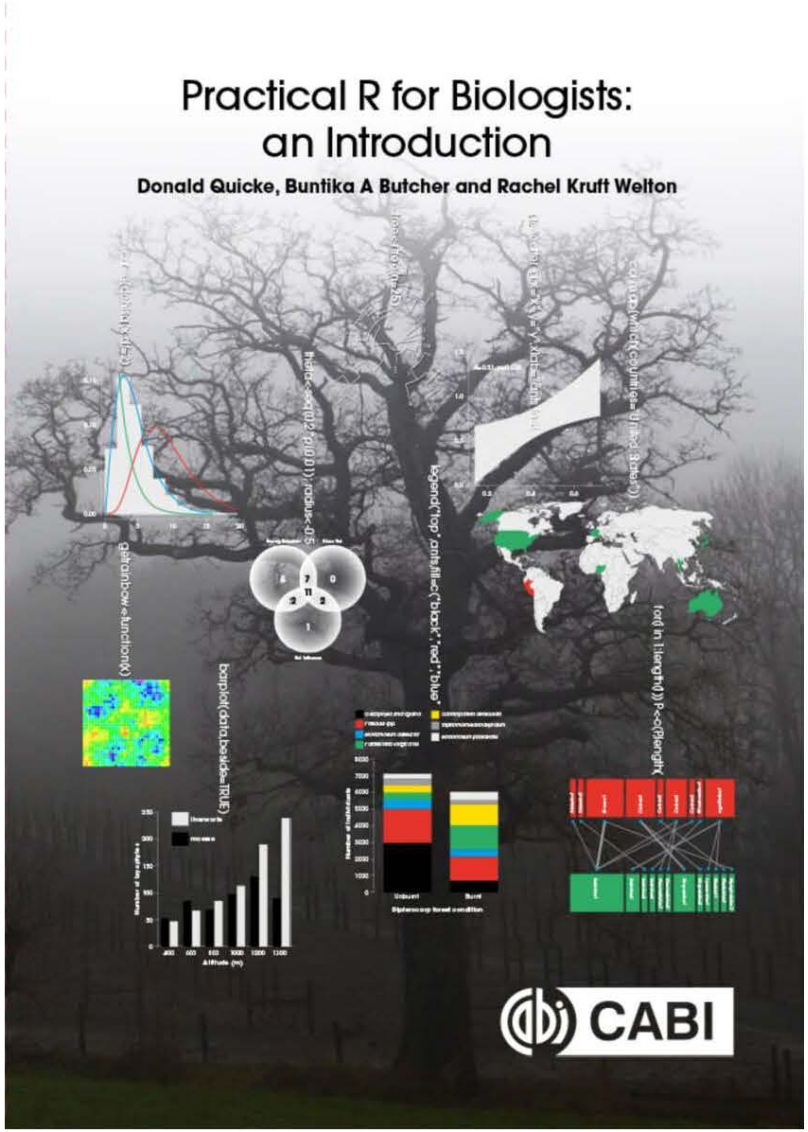

Practical R for Biologists

An Introduction

Donald Quicke, PhD, Buntika A. Butcher, PhD and Rachel Kruft Welton, PhD
CABI
Paperback
March 2021
9781789245349
$56.00 DL

R is a freely available, open-source statistical programming environment which provides powerful statistical analysis tools and graphics outputs. R is now used by a very wide range of people; biologists (the primary audience of this book), but also all other scientists and engineers, economists, market researchers and medical professionals. R users with expertise are constantly adding new associated packages, and the range already available is immense.

This text works through a set of studies that collectively represent almost all the R operations that biology students need in order to analyze their own data. The material is designed to serve students from first year undergraduates through to those beginning post graduate levels. Chapters are organized around topics such as graphing, classical statistical tests, statistical modelling, mapping, and text parsing. Examples are based on real scientific studies, and each one covers the use of more R functions than those simply necessary to get a p-value or plot. The book walks the reader through the data analysis process, starting with very simple plots, and continuing through more complex analyses and programming. It shows how to deal with issues such as error messages that can be confronting for beginners, in order to set students up for a successful scientific career using R.

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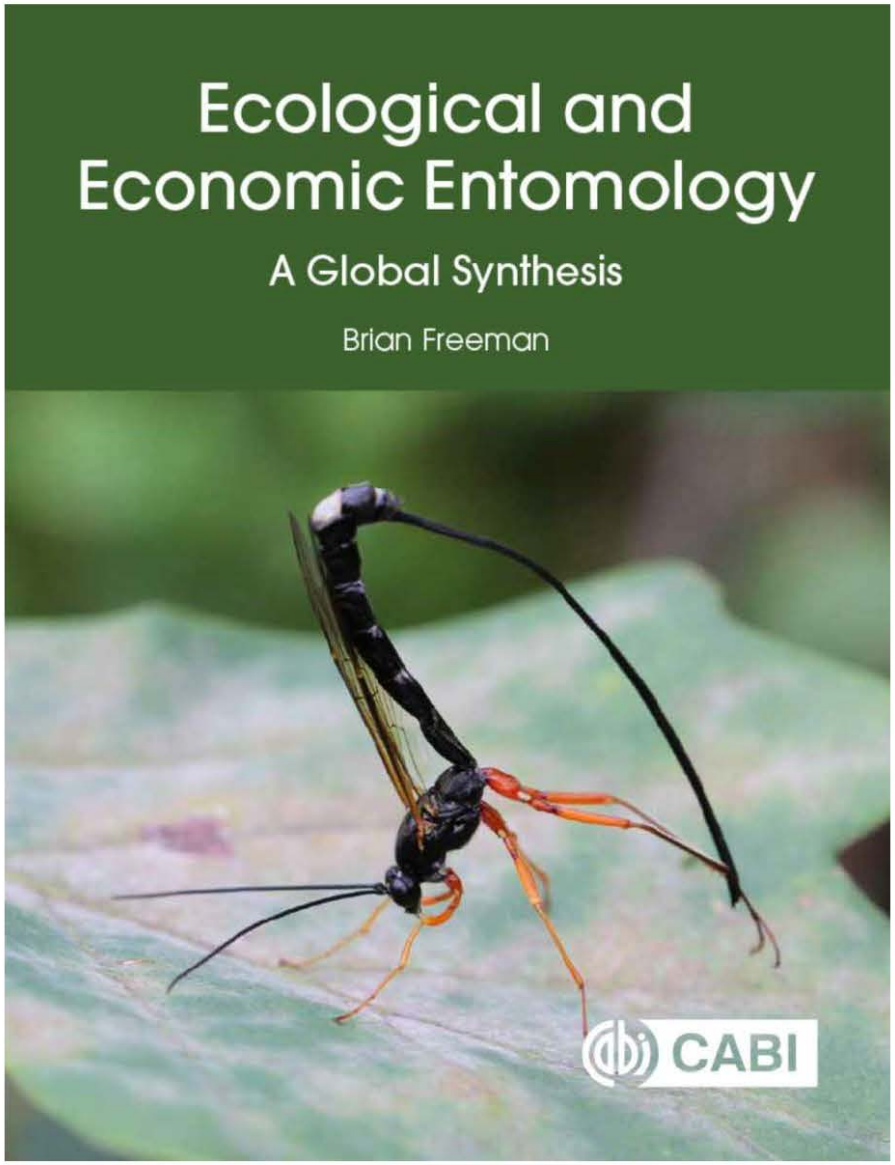

Ecological and Economic Entomology

A Global Synthesis

Brian Freeman
CABI
Hardback
December 2020
9781789241181
$275.00 DL

Ecological and Economic Entomology is a comprehensive advanced text covering all aspects of the role of insects in natural ecosystems and their impacts on human activity.

The book is divided into two sections. The first section begins with an outline of the structure, classification and importance of insects, followed by the geographical aspects of plant distribution and the complex defenses plants marshal against herbivorous insects. Insect pests affecting plant roots, stem, leaf, and reproductive systems are covered in a comprehensive review. This section also covers insects that are important in medical and veterinary science, paying particular attention to those that transmit pathogens. The section concludes with the beneficial aspects of insects, especially their use in biological control, but also as soil formers and their importance in forensic science.

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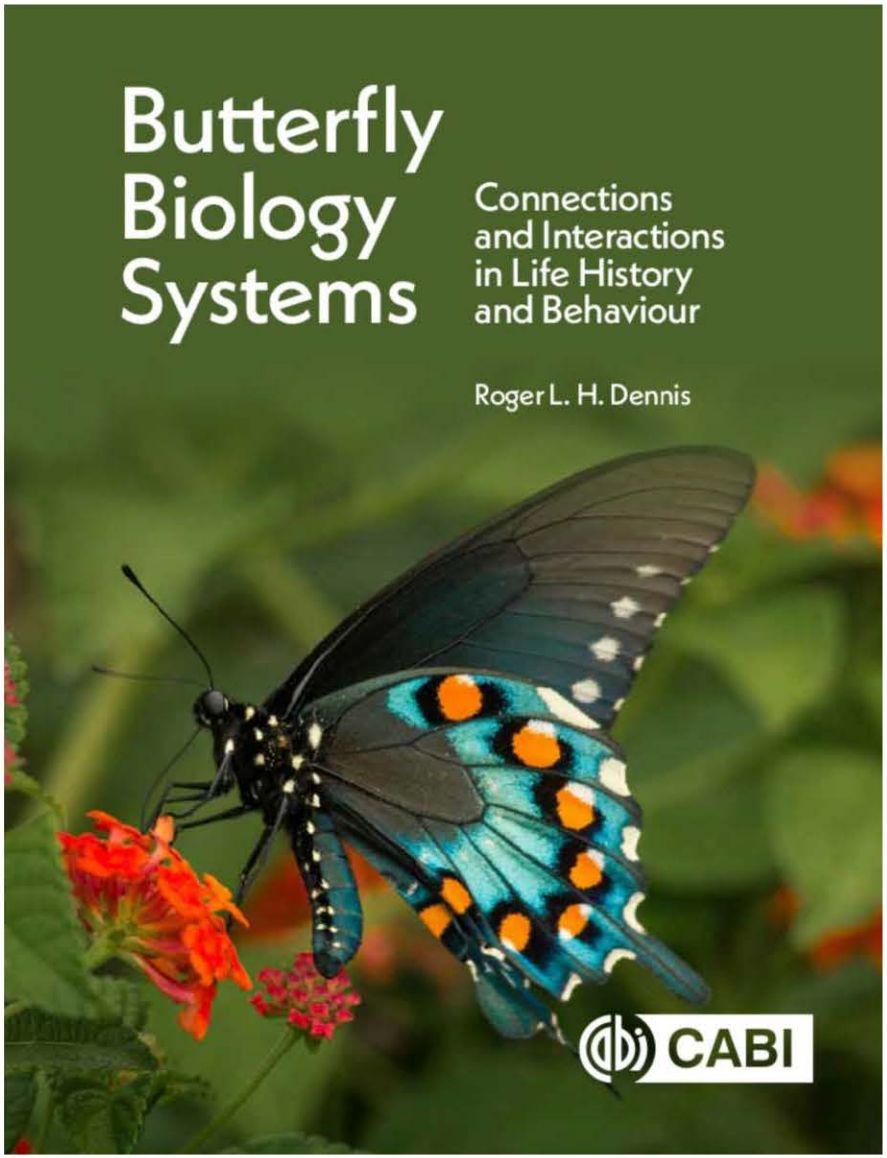

Butterfly Biology Systems

Connections and Interactions in Life History and Behaviour

Roger L. H. Dennis
CABI
Hardback
November 2020
9781789243574
$210.00 DL

Butterflies, among key animals for assessing environmental changes, have consequently also become prominent model organisms for the study of trade-offs in life history and behavioral traits. Examples include factors affecting the size of egg batches, fast or slow larval growth, waiting or searching for mates, migrating or staying put in the habitat, roosting alone or together in aggregations, and the development of different defense mechanisms. The book focuses on the factors and trade-offs leading to the development and evolution of distinct traits emerging in the life cycle of butterflies within their habitats. The reader is taken systematically through research findings in each life history stage, on the links identified between different aspects of butterfly biology that have been discovered, and introduced to novel ideas emerging from taking an integrative view of butterfly life history and behavior.

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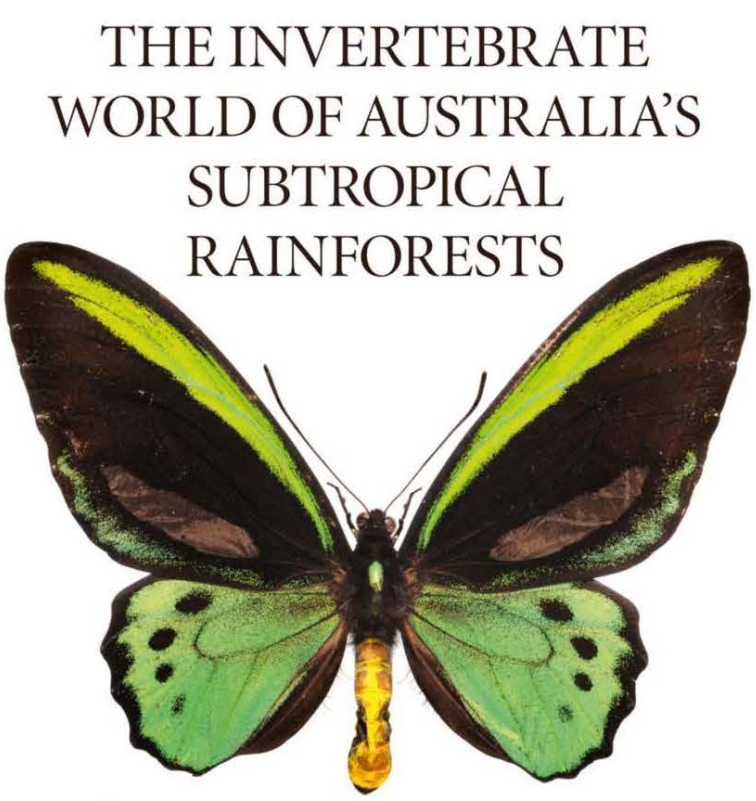

The Invertebrate World of Australia's Subtropical Rainforests

Geoff Williams
CSIRO Publishing
Hardback
October 2020
9781486312917
$132.95 DL

The Invertebrate World of Australia's Subtropical Rainforests is a comprehensive review of Australia's Gondwanan rainforest invertebrate fauna, covering its taxonomy, distribution, biogeography, fossil history, plant community and insect–plant relationships. This is the first work to document the invertebrate diversity of this biologically important region, as well as explain the uniqueness and importance of the organisms.

This book examines invertebrates within the context of the plant world that they are dependent on and offers an understanding of Australia's outstanding (but still largely unknown) subtropical rainforests. All major, and many minor, invertebrate taxa are described and the book includes a section of color photos of distinctive species. There is also a strong emphasis on plant and habitat associations and fragmentation impacts, as well as a focus on the regionally inclusive Gondwana Rainforests (Central Eastern Rainforest Reserves of Australia) World Heritage Area.

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Transcriptomics in Entomological Research

Edited by Matan Shelomi
CABI
Hardback
January 2020
9781789243130
$135.00 DL

Bridging the gap between genome and phenotype, the transcriptome is a molecular-level snapshot of the act of living. Transcriptomics shows which genes are expressed into proteins in a specific tissue of a specific organism at a specific time and condition. This book gives an account of the extraordinary diversity of ways transcriptomics has been and can be utilized in basic and applied entomological research. It encompasses a vast range of disciplines within entomology, applying transcriptomics to the study of over one million described species of insects. It covers a vast range of disciplines from phylogenomics to pest management, from ecology to physiology, and from behavior to evolutionary biology. The book covers the breadth and depth of transcriptomics use in research to showcase the utility of this technology in all disciplines. Research examples in the book are relevant to fish, birds, plants, and fungi, as well as insects and other arthropods, helping scientists in any field, using any system, to understand what transcriptomics can do for them.

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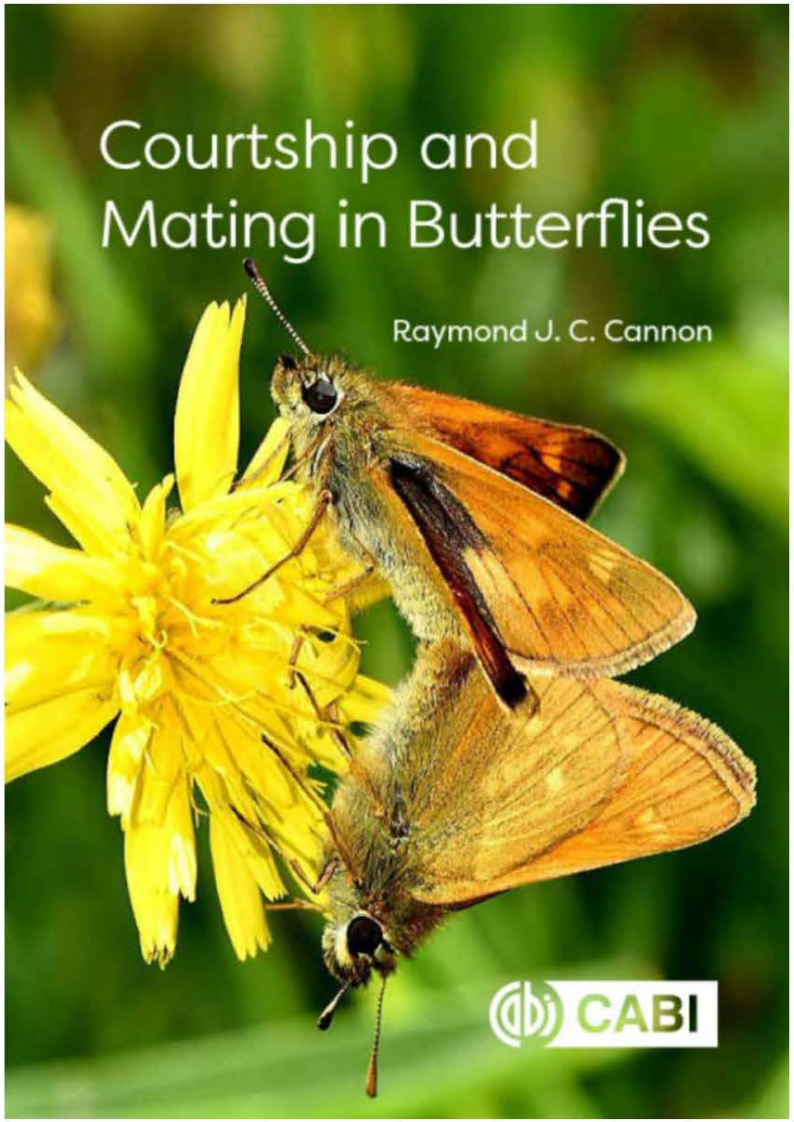

Courtship and Mating in Butterflies

R. J. Cannon
CABI
Hardback
January 2020
9781789242638
$135.00 DL

This book presents a readable account of butterfly behavior, based on field observations, great photographs and the latest research. The main focus is on courtship and mating - including perching, searching and territorial behavior - but to understand these subjects it is necessary to explain how mates are chosen and this requires sections on wing colors and patterns. A chapter on butterfly vision is also essential in terms of how butterflies see the world and each other. There have been exciting discoveries in all of these fields in recent years, including: butterfly vision (butterfly photoreceptors), wing patterns (molecular biology), wing coloration (structural colors and nano-architecture), mating strategies and female choice (ecology and behavior).

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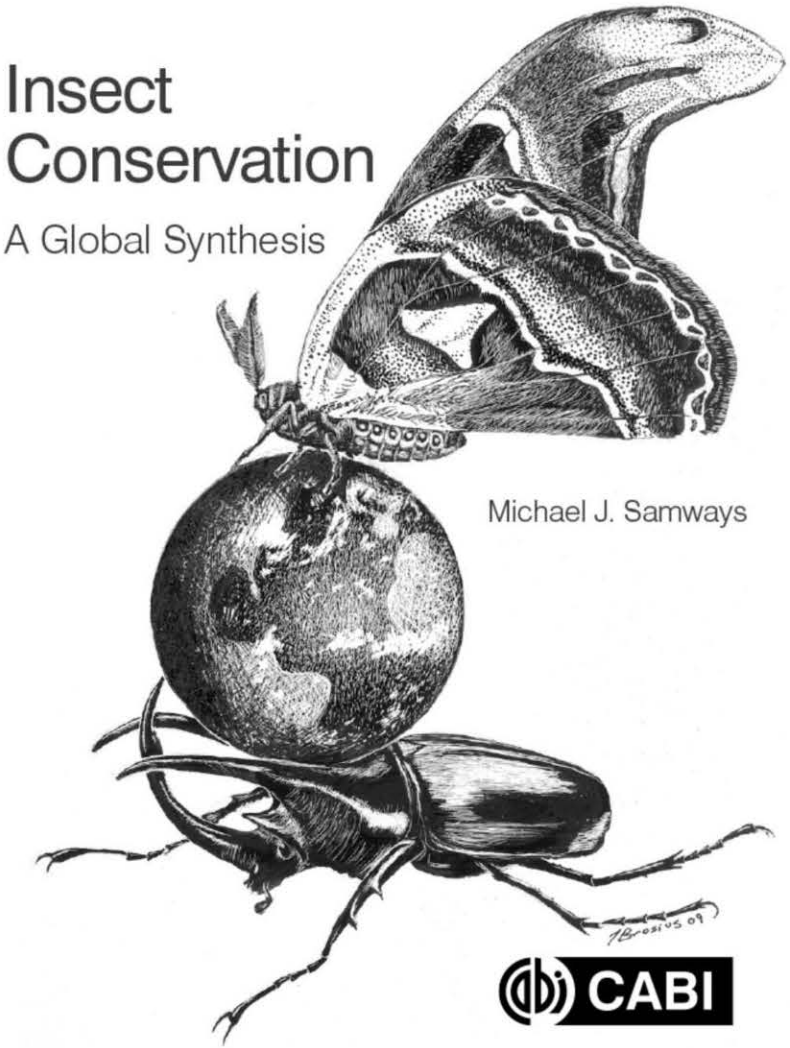

Insect Conservation

A Global Synthesis

Michael J. Samways
CABI
Paperback
December 2019
9781789241679
$90.00 DL

Insect Conservation: A Global Synthesis is a landmark, field-defining work written by Professor Michael Samways, one of the founding fathers of this burgeoning discipline of conservation science. It presents a state-of-the-art, comprehensive review of the entire field of insect conservation, from single-species conservation to whole-ecosystem approaches, and from natural ecosystems to the urban landscape.

This book is designed to be used by students of conservation biology and ecology, but also serves as an essential overview for professional entomologists with an interest in conservation, and for conservationists interested in insects. The book communicates on three levels: (i) through the text, with extensive references providing a gateway to the ever-increasing primary literature; (ii) through the extensive use of carefully constructed illustrations, with detailed captions which act to summarize the text and are complete in their own right; and (iii) through focused key points at the end of every chapter, which summarize the main learning points for students.

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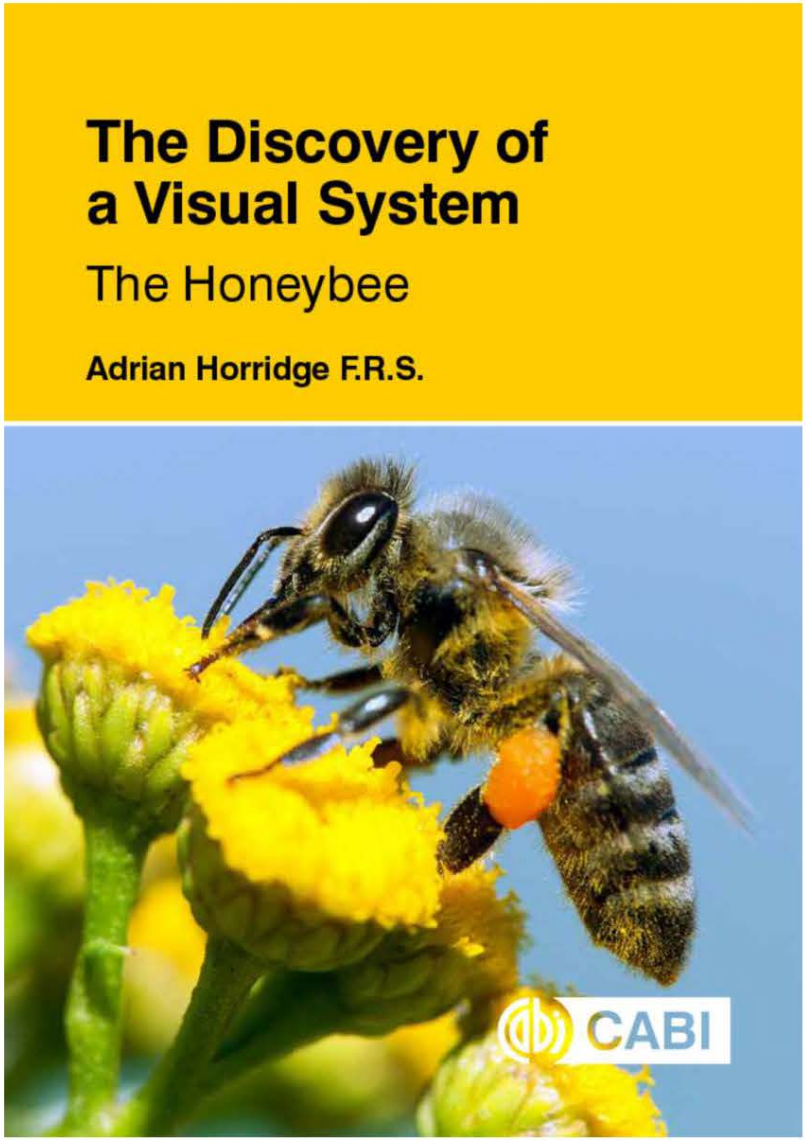

The Discovery of a Visual System

The Honeybee

Adrian Horridge
CABI
Hardback
November 2019
9781789240894
$140.00 DL

This book is the only account of what honeybees actually see. Bees detect some visual features such as edges and colors, but there is no sign that they reconstruct patterns or put together features to form objects. Bees detect motion but have no perception of what it is that moves, and certainly they do not recognize "things" by their shapes. Yet, even with a minute brain, they clearly see well enough to fly and find food. The surprising conclusion is that bee vision is adapted to the recognition of places, not things.

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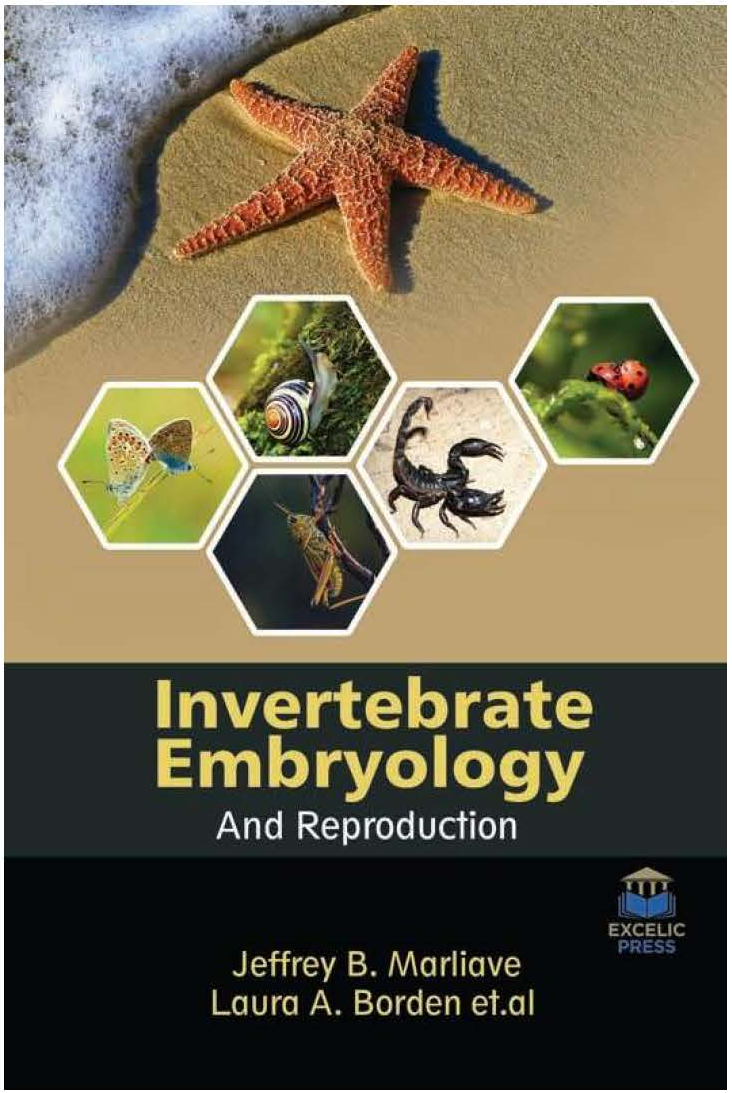

Invertebrate Embryology And Reproduction

Laura A. Borden
9781642244342
EXCELIC
2020
$ 180.00 DL

In the succeeding chapters, the book focuses on pond snail reproduction as the model in the environmental risk assessment; reproduction and population dynamics as biotypic markers of Russian wheat aphid digraphs noxia (kurdjumov); coelomocytes biology and possible immune functions in invertebrates with special remarks on nematodes; emigration speed and the production of sexuals in colonies of the ant hemothorax crassispinus under high and low levels of disturbance; the evolution of caste-biasing symbionts in the social Hymenoptera.

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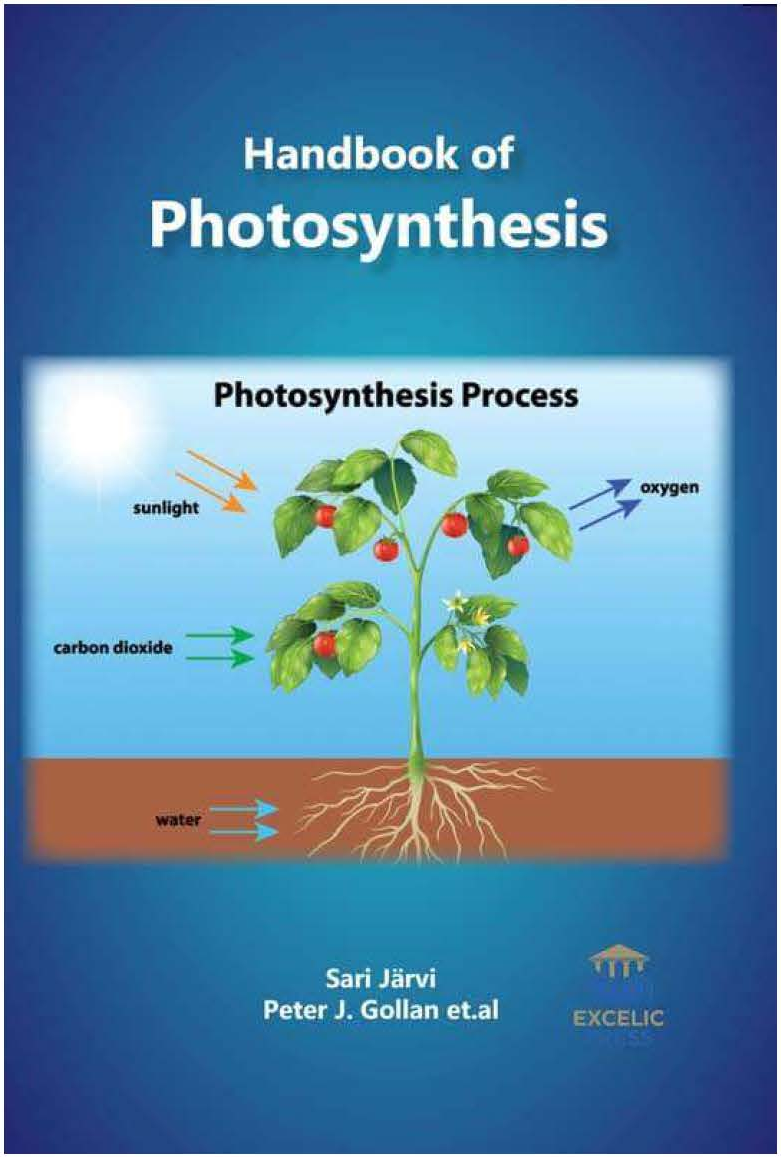

Handbook Of Photosynthesis

Sari Järvi
9781642243161
EXCELIC
2020
$ 190.00 DL

Plants are green on the grounds that they have chloroplast containing chlorophyll in their leaf. Chlorophyll is a vital shade completing the biochemical procedure called photosynthesis. The organism's life in the world depends on the photosynthesis process, so it is considered as an essential process. Diverse types of biological molecules are created directly or indirectly from the photosynthesis products. Photosynthesis occurs not only in eukaryotic organisms such as green plants and green algae but also in prokaryotic organisms such as cyanobacteria and certain groups of bacteria. Chlorophylls help plants to create their own particular nourishment, consequently called autotrophs. Not just plant even some microbes do contain chlorophyll; such microscopic organisms are called as chemotrophs. Photosynthesis is a vibrant discipline of research in which many innovative developments have taken place in the past several years.

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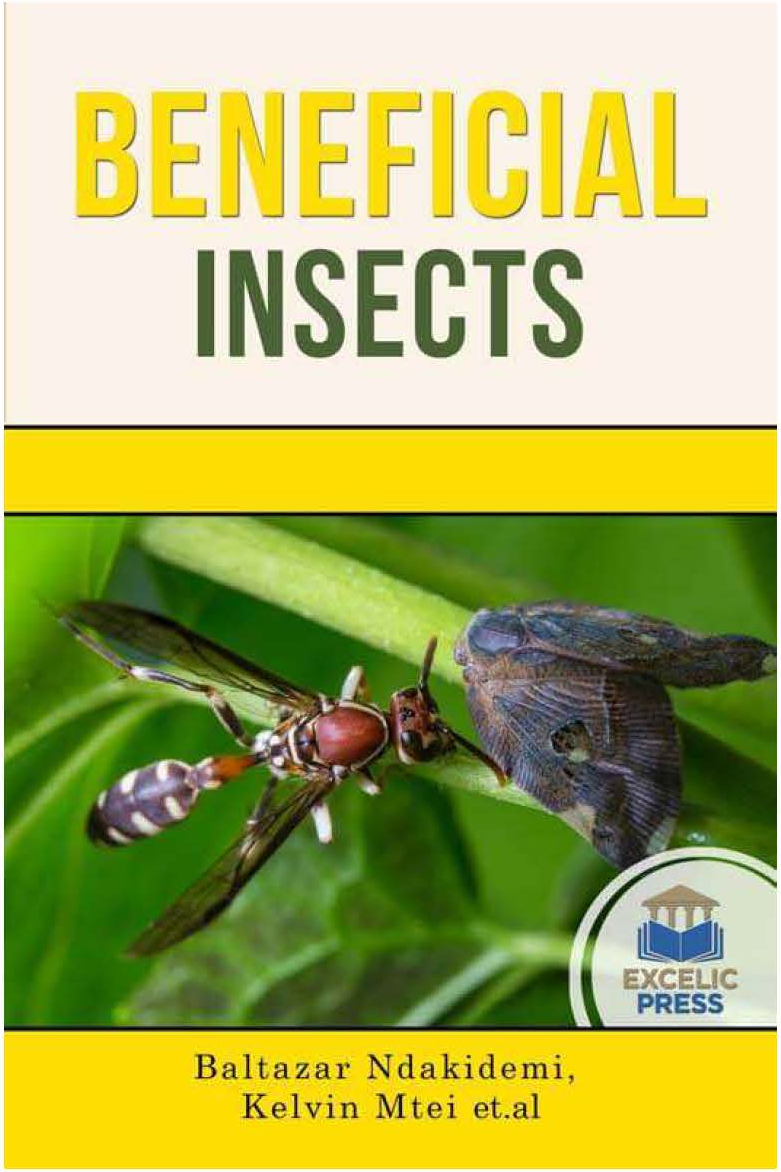

Beneficial Insects

Kelvin Mtei
9781642242461
EXCELIC
2020
$ 180.00 DL

Beneficial insects provide natural ecosystem services such as biological control of pests, soil formation, nutrient cycling and pollination of plants. Beneficial insects include pollinators important in the essential pollination process of all plants, and natural enemies of pests such as parasitoids and predators which are important in the suppression of pest damage to crops.

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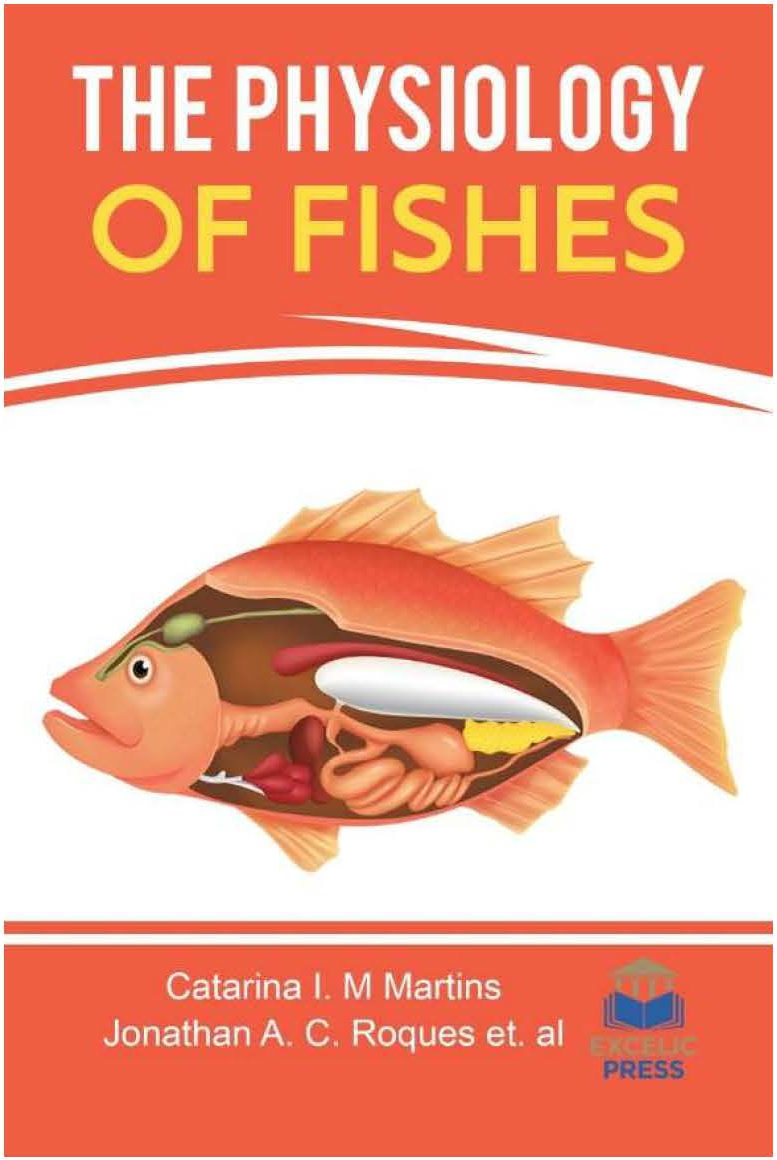

The Physiology Of Fishes

Catarina I. M Martins
9781642241884
EXCELIC
2019
$ 190.00 DL

Fish physiology refers to the scientific study of how the component parts of fish function together in the living fish. There is an obvious and increasing trend toward multidisciplinary approaches to understanding physiological research, incorporating the many fields of biology to begin to understand more fully the impact of anthropogenic contamination of the aquatic ecosystem.

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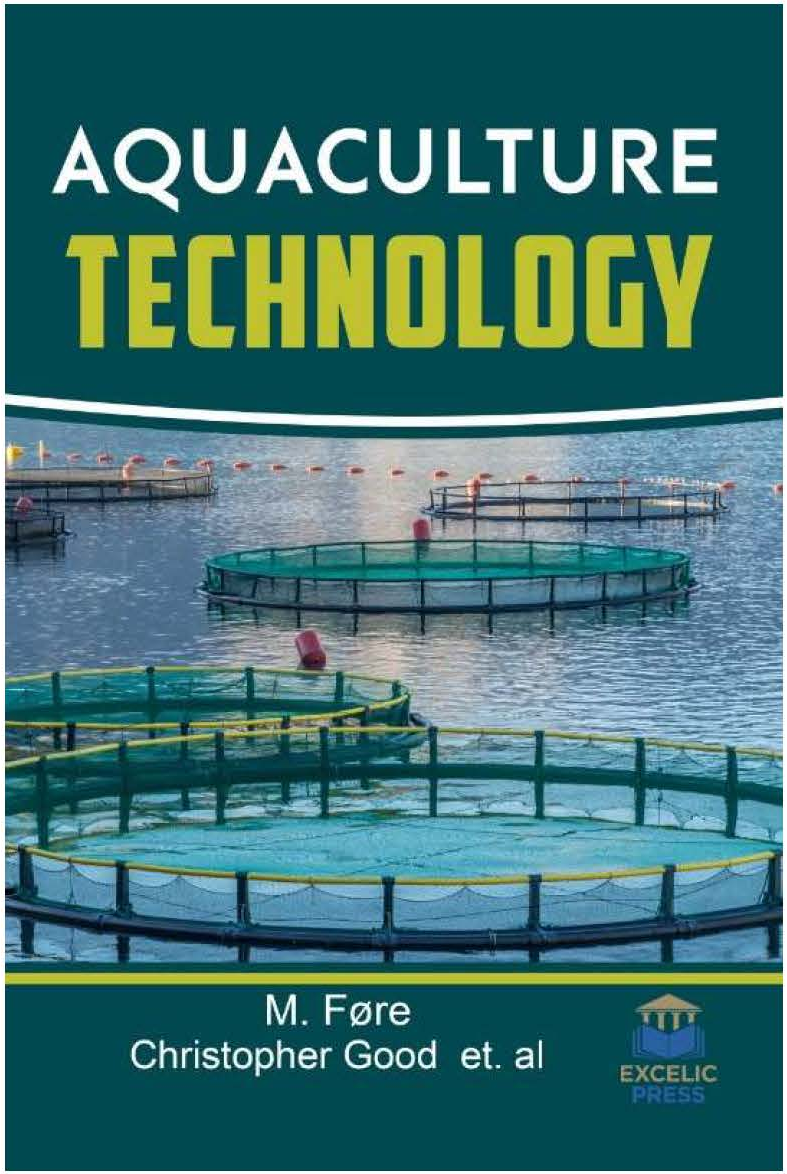

Aquaculture Technology

M. Føre
9781642240542
EXCELIC
2019
$ 180.00 DL

The book reports on the current progress and thrust areas in the use of synthetic hormones in fish breeding, production of monosex, uniparental and polyploid individuals, molecular biology and transgenesis, biotechnology in aquaculture nutrition and health management, gene banking and the marine natural products.

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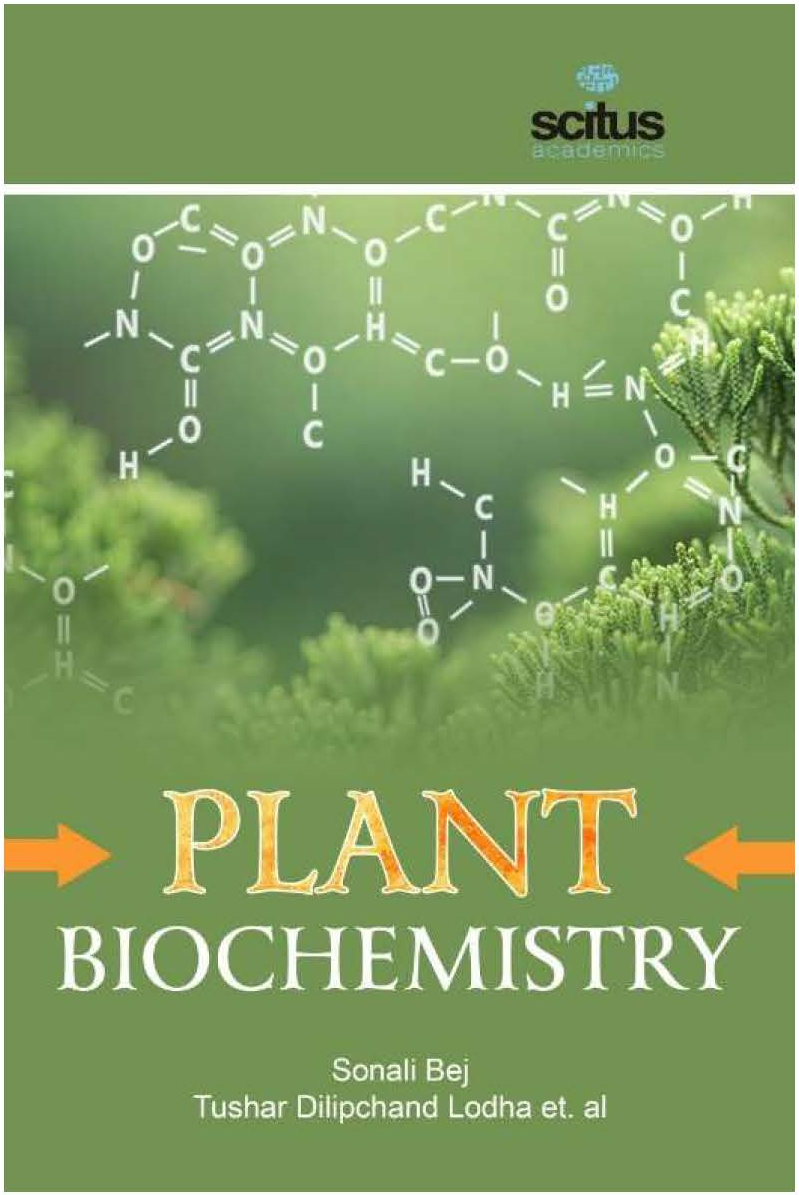

Plant Biochemistry

Sonali Bej
9781642230727
SCITUS
2019
$ 189.00 DL

In the second half of the 20th century the finding of the structure of DNA and RNA, the steps in protein synthesis, and other great discoveries of molecular biology revolutionized the study of plants at all levels, from cells to ecosystems. Taxonomists, evolutionists, ecologists, physiologists, and developmental biologists are now using molecular techniques and are discovering many responses and mechanisms that were not accessible in the past. It is now possible to identify, with much precision, the particular genes responsible for traits. And, with the techniques of molecular biology, scientists can introduce or eliminate genes for specific traits. Progress in plant molecular biology has been dependent on efficient methods of introducing foreign DNA into plant cells. Gene transfer into plant cells can be achieved by either direct uptake of DNA or the natural process of gene transfer carried out by the soil bacterium Agrohacterium. Versatile gene-transfer vectors have been developed for use with Agrohacterium and more recently vectors based on the genomes of plant viruses have become available. Plant agricultural production is the basis for human nutrition. Plant gene technology, which can be regarded as a section of plant biochemistry, makes a contribution to combat the impending global food shortage due to the enormous growth of the world population. The use of environmentally compatible herbicides and protection against viral or fungal infestation by means of gene technology is of great economic importance. Plant biochemistry is also instrumental in breeding productive varieties of crop plants.

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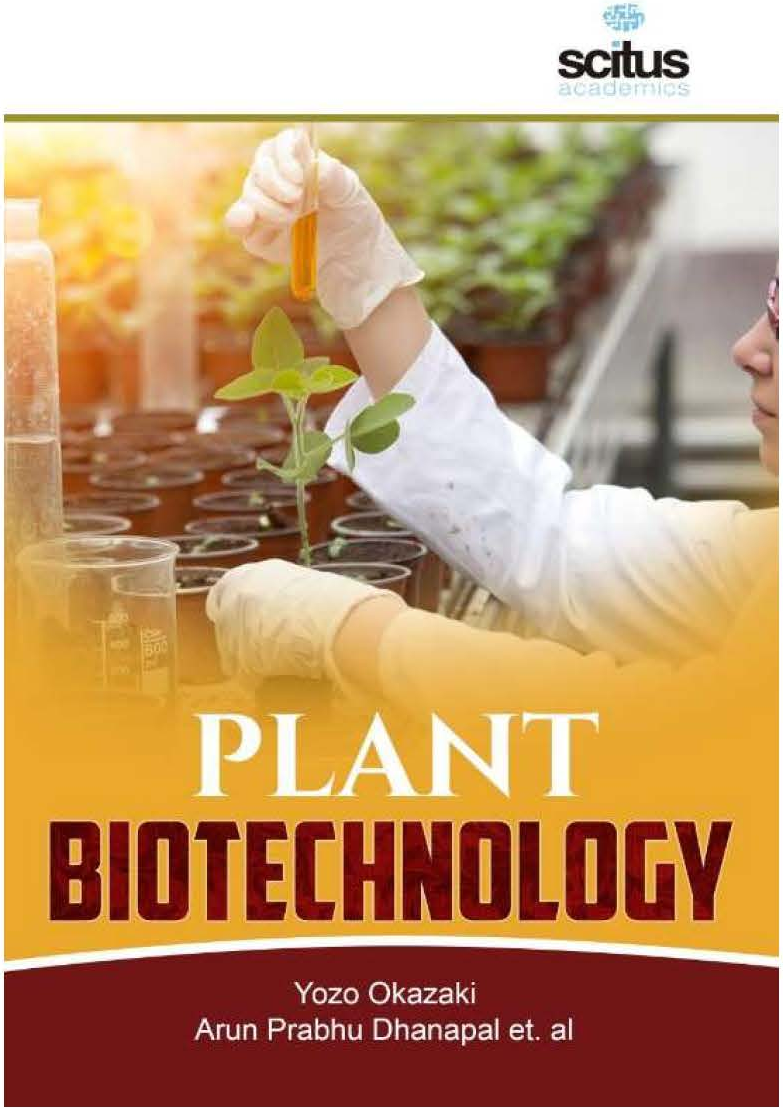

Plant Biotechnology

Yozo Okazaki
9781642230734
SCITUS
2019
$ 189.00 DL

Advances in understanding plant biology, novel genetic resources, genome modification, and omics technologies create new solutions for food security and novel biomaterials production under changing environmental conditions. The evolution of plant breeding is a classic example of how improved biological understanding has been adapted to provide more effective methods of meeting the demands of a changing world. Recent progress in plant genomics has allowed us to discover and isolate important genes and to analyze functions that regulate yields and tolerance to environmental stress. New gene and germplasm candidates that are expected to lead to improved crop yields and other plant traits under stress have to pass long development phases based on trial and error using large-scale field evaluation. Plant Biotechnology sheds light on current biotechnological research to develop modern technology for producing biologicals and also increasing plant immunity in present environmental conditions. It is intended to provide comprehensive information of novel molecular tools, screening technologies, should become the main goal of the plant biotechnological revolution searchers to produce transgenic plants in a more convenient and safer way to genetic modification of stem cells holding significant therapeutic promise to treat complications of diabetes and obesity.

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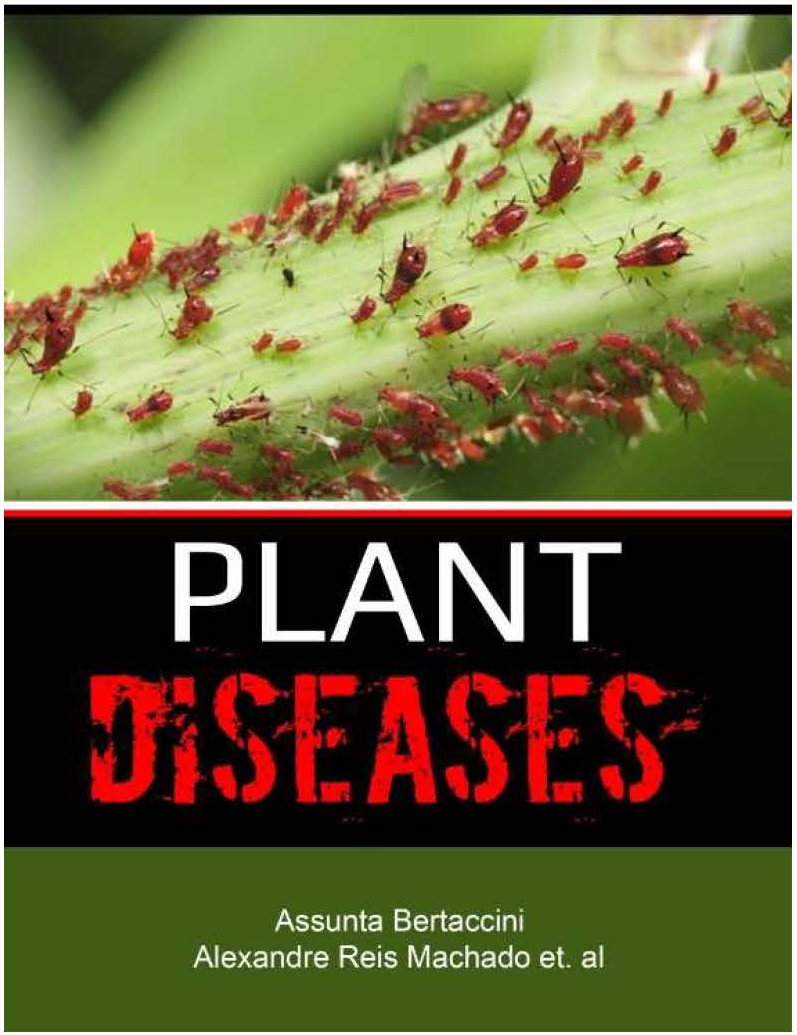
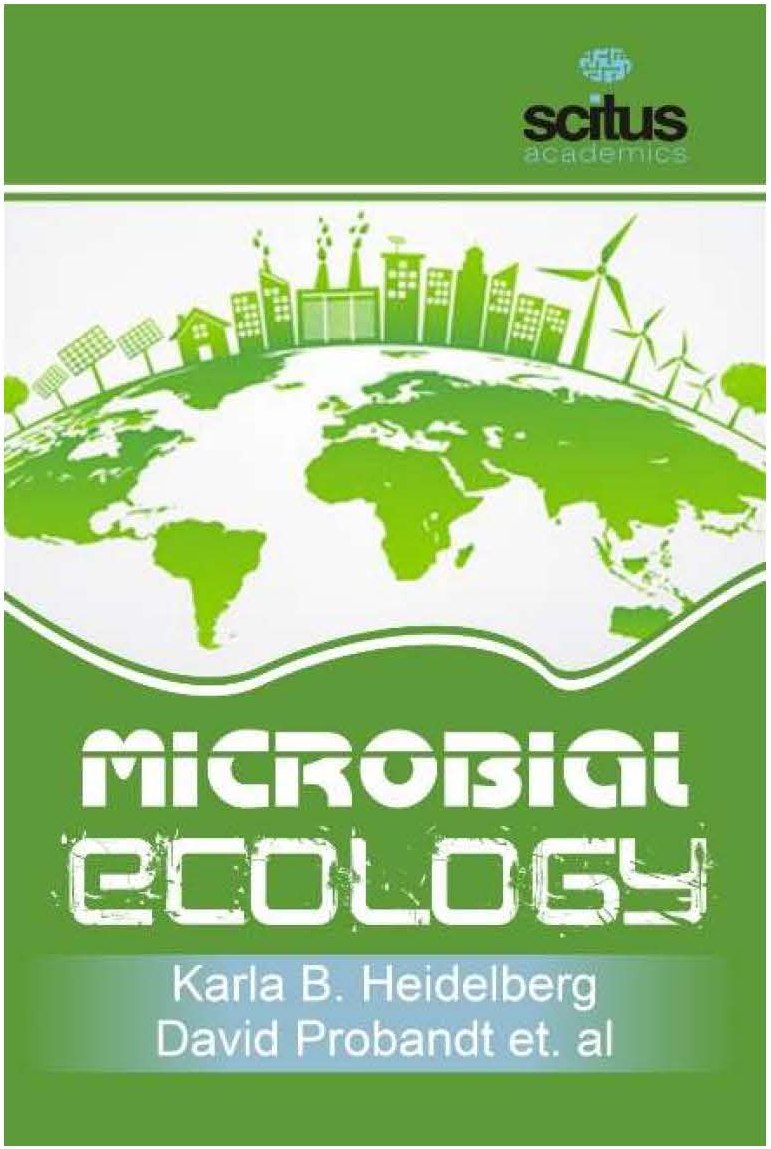


Plant Diseases

Assunta Bertaccini
9781642230758
SCITUS
2019
$ 189.00 DL

Plant protection is the practice of managing weather, weeds, pests and diseases that damage or inhibit the growth of fruit, vegetable and other horticultural crops. Proper crop protection is important to produce higher quality crops with minimal wastage. This increase in productivity leads to less land, water and labor being required for food crops. The decrease in agricultural productivity can be attributed to a variety of reasons; damage caused by pests and pathogens plays a significant role in crop losses throughout the world. The losses in crop yield due to pathogen infections range between 20% and 40%. On average, pathogen-induced losses of maize, barley, rice and soybean are estimated to be around 12%, groundnuts and potatoes are estimated to be around 24% and wheat and cotton are estimated to be around 50% and 80%, respectively.



Microbial Ecology

David Probandt
9781642230567
SCITUS
2019
$ 179.00 DL

Microbial ecology deals with the interaction of microorganisms with their environment, which is an essential component in understanding the functioning of the global ecosystem. Microbes are the most abundant organisms on and in our planet, some of which grow at incredible rates. Microbes such as Bacteria, Archaea, Protists represent “the invisible presence” and are found in most terrestrial and aquatic systems. As a result of their shear numbers and high rates of growth they can have significant impact on their chemical environment. Microbial ecology lacks the firm theoretical basis of traditional ecology and, as a result, has suffered from being empirical in nature and descriptive in practice. Thus, it is essential to build the theoretical basis of microbial ecology with studies on fundamental aspects of microbial diversity and in situ function. In recent years the use of ribosomal RNAs (rRNAs) and their genes have produced an authentic revolution in microbial ecology. The sequencing of these genes has allowed a whole range of microorganisms, mainly prokaryotes, to be studied without running into selective enrichment and isolation problems. Most molecular ecology techniques are based on these genes. Microbial Ecology is focused on the presentation of high-quality scientific investigations of how microorganisms interact with their environment, with each other and with their hosts. It is intended to present insights into the dynamic process of genetic diversity of microorganisms by presenting the contributions of scientists ad subject specialists who are engaged in the generation of new ideas and techniques employed for the assessment of microbial ecology in different perspectives. The chapters’ content discloses the magnitude of genetic diversity of microorganisms living in different environmental conditions. The complexity and diversity of microbial populations is by far the highest among all living organisms. The diversity of microbial communities and their ecologic roles are being explored in soil, water, on plants and in animals, and in extreme environments.

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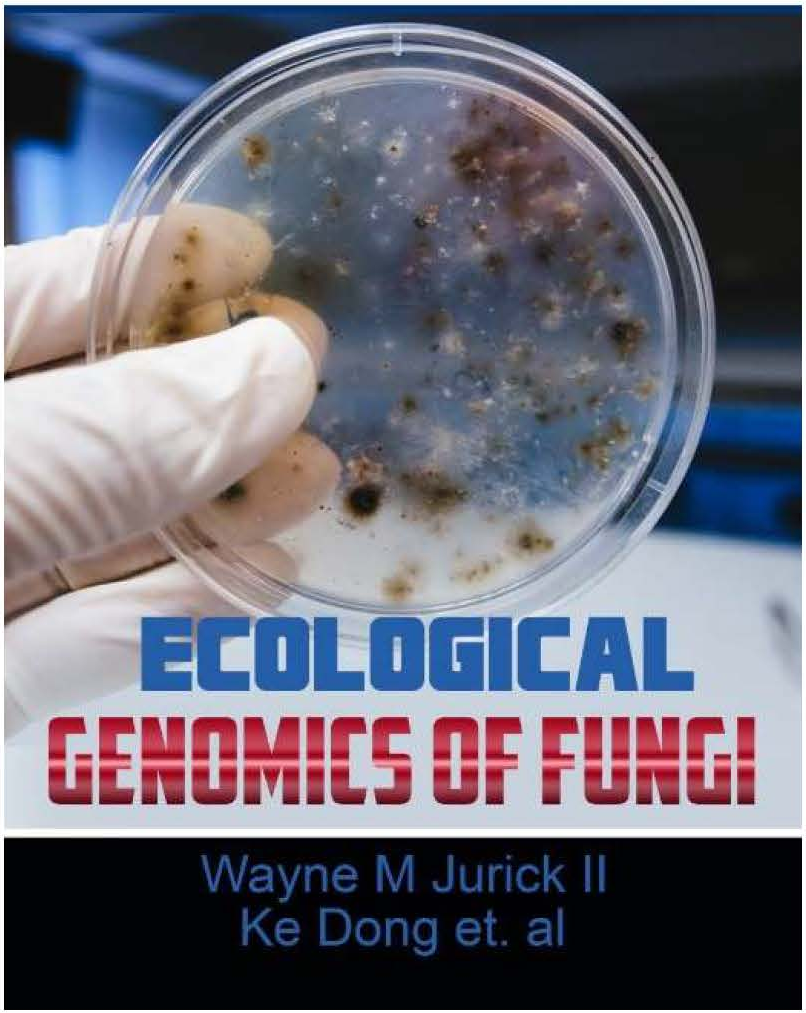
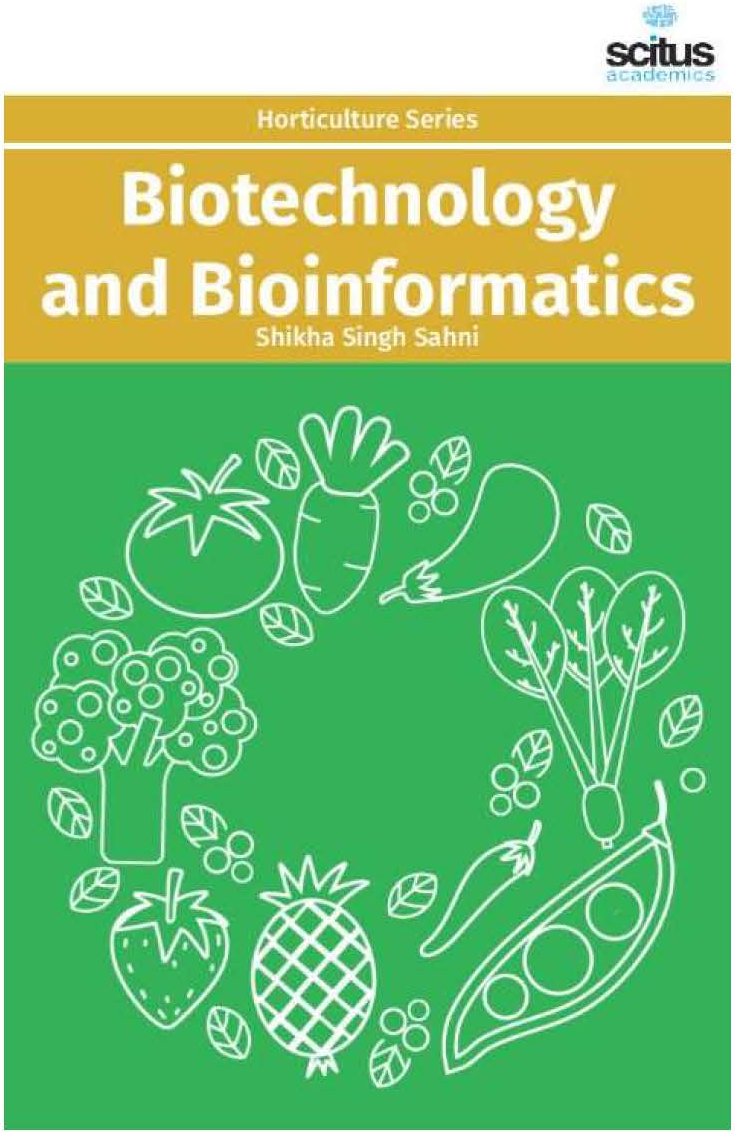


Ecological Genomics Of Fungi

Ke Dong
9781642230116
SCITUS
2019
$ 189.00 DL

Ecological Genomics of Fungi brings together studies related to pathogenic fungi, fungal biology, and all other aspects of fungal research. It covers a broad diversity of fungal systems and provides unique insight into the functions of those fungi in various ecosystems – from soil, to plant, to human. It also discusses tools, applications, and the most recent developments available to explore the biology of soil fungi at the molecular level. This book addresses the wonders of fungal diversity, including recent advances on the understanding of the evolution of the kingdom Fungi, approaches to documenting and interpreting fungal diversity, and current efforts concerning fungal conservation. The book also includes investigations of fungi and their traditional allies that relate structure and function to growth, reproduction, morphogenesis, differentiation, its role as pathogen and parasites.



Biotechnology and Bioinformatics

Shikha Singh Sahni
9781681179421
SCITUS
2018
$ 199.00 DL

The volume 'Biotechnology and Bioinformatics' contains recent advances in certain biotechnological applications. It presents some of the key concepts, methods, software packages, and databases used in bioinformatics, with an emphasis on those relevant to plant science. It also cover some fundamental issues related to biological sequence analyses, transcriptome analyses, computational proteomics, computational metabolomics, bio-ontologies, and biological databases. A focus on a few emerging research topics in bioinformatics is given.

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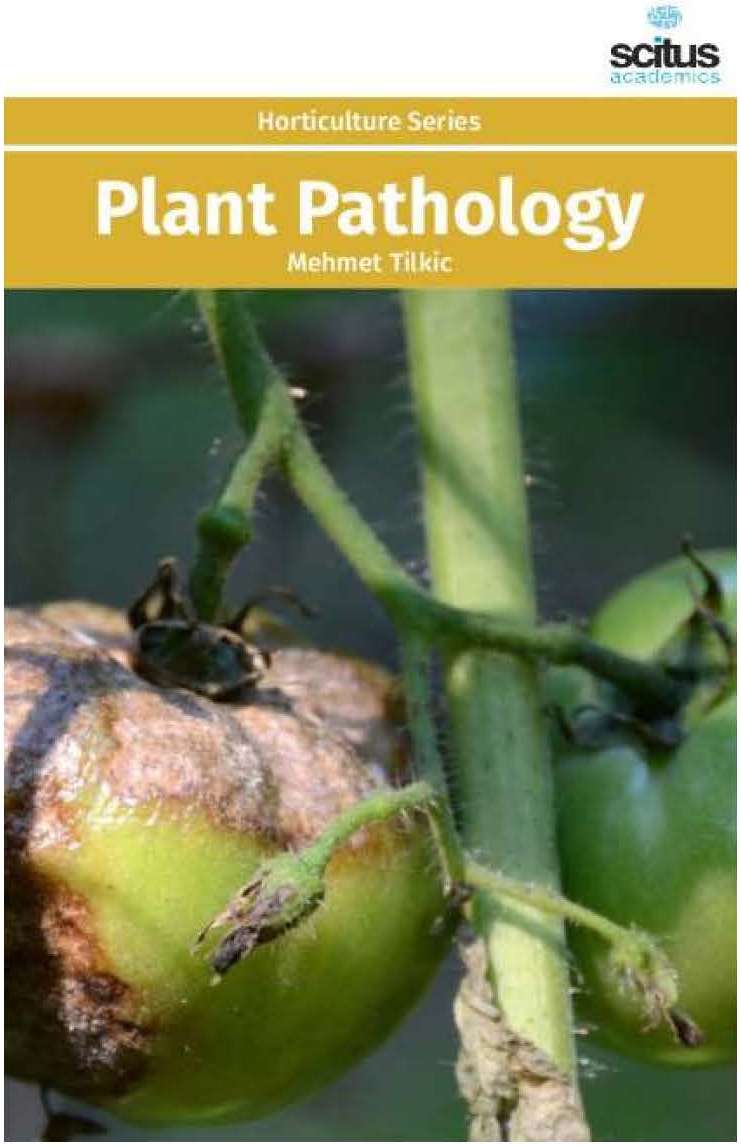
Plant Pathology



Mehmet Tilkic
9781681179445
SCITUS
2018
$ 199.00 DL

Plant diseases play a significant role on our everyday lives. The science that deals with the study of diseases of plants, their development and control is called Plant Pathology. Plant diseases are caused by biotic agents like fungi, bacteria, actinomycets, Mycoplasma, viruses, nematodes, and flowering parasites or by abiotic like unfavorable environmental conditions or nutritional deficiencies. Plants and their pathogens are engaged in continuous evolutionary battles and sustainable disease management requires novel systems to create environments conducive for short-term and long-term disease control. This work provides the knowledge of the fundamental factors that drive host–pathogen co-evolution in wild systems can provide new insights into disease development.Such evolutionary principles can be used to guide the formulation of sustainable disease management strategies which can minimize disease epidemics while simultaneously reducing pressure on pathogens to evolve increased infectivity and aggressiveness. This Books provides the latest information on plant pathogenic fungi, viruses, bacteria, phytoplasmas and spiroplasmas, including pathogen biology from genetics to geographical distributions. This book is an attempt in the process to provide readers with a relevant book which acquaints them with the current developments and advances in the field of plant pathology and biotechnology, particularly within the context of the widening scope of such arenas as biochemistry. In this book, expert scholars share their research knowledge and key literature which are vital toward the diagnosis of plant diseases across the globe, addressing traditional plant pathology techniques, as well as advanced molecular diagnostic approach.

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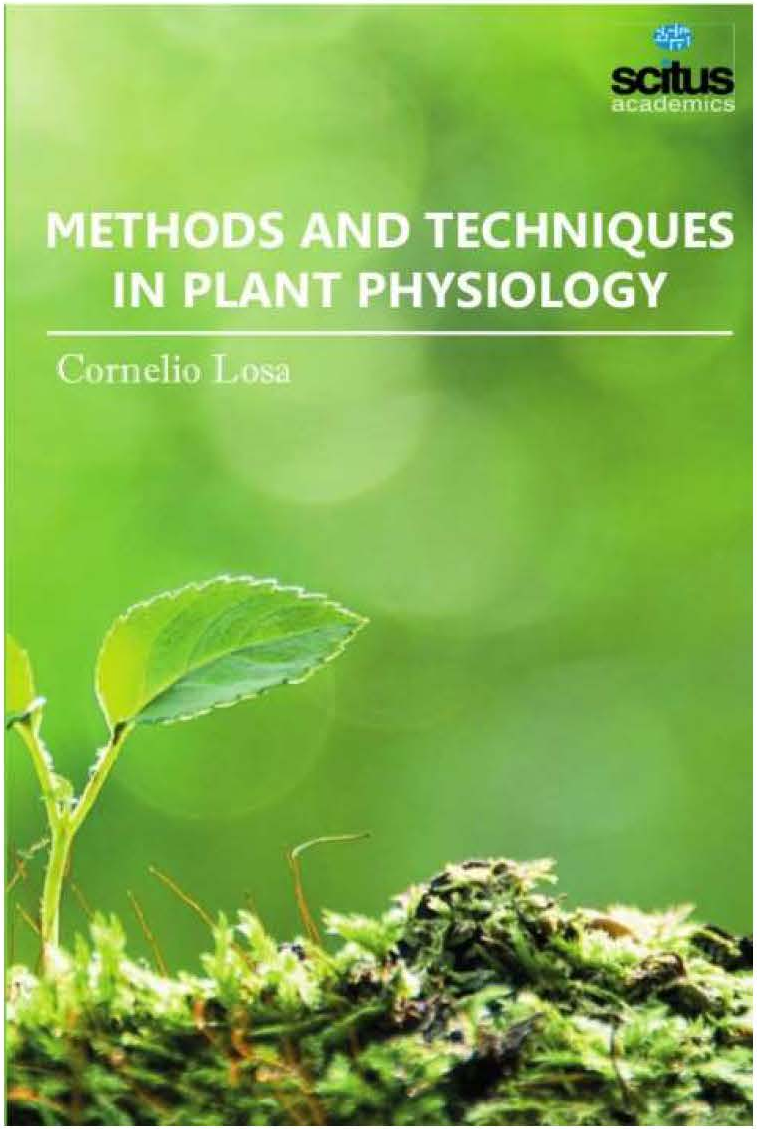

Methods and Techniques in Plant Physiology

Cornelio Losa
9781681175430
SCITUS
2017
$ 169.00 DL

Plant physiology is the study of how different parts of plants function. It includes many aspects of plant life, including nutrition, movement, and growth. Fundamental processes such as photosynthesis, respiration, plant nutrition, plant hormone functions, tropisms, nastic movements, photoperiodism, photomorphogenesis, circadian rhythms, environmental stress physiology, seed germination, dormancy and stomata function and transpiration, both parts of plant water relations, are studied by plant physiologists. Plant physiology includes the study of biological and chemical processes of individual plant cells. Plant cells have a number of features that distinguish them from cells of animals, and which lead to major differences in the way that plant life behaves and responds differently from animal life. This book explores how plant physiology helps us to understand the many functions and behaviors of plants. Methods and Techniques in Plant Physiology is dedicated to physiology, biochemistry, cellular and molecular biology, genetics, biophysics, and environmental biology of plants. Techniques related to various physiological phenomenon are focus of tremendous interest and importance to plant physiologist, agronomist, horticulturist, ecologist, and biochemists.

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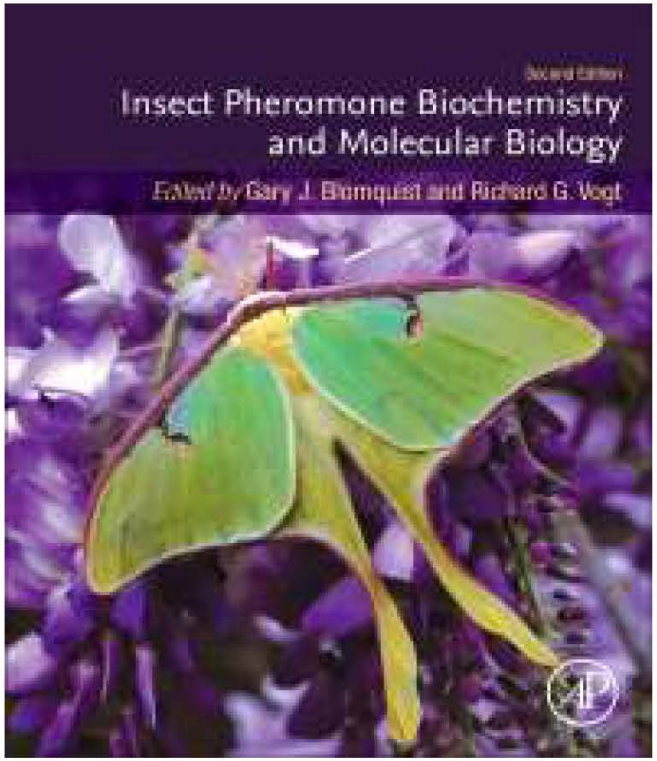
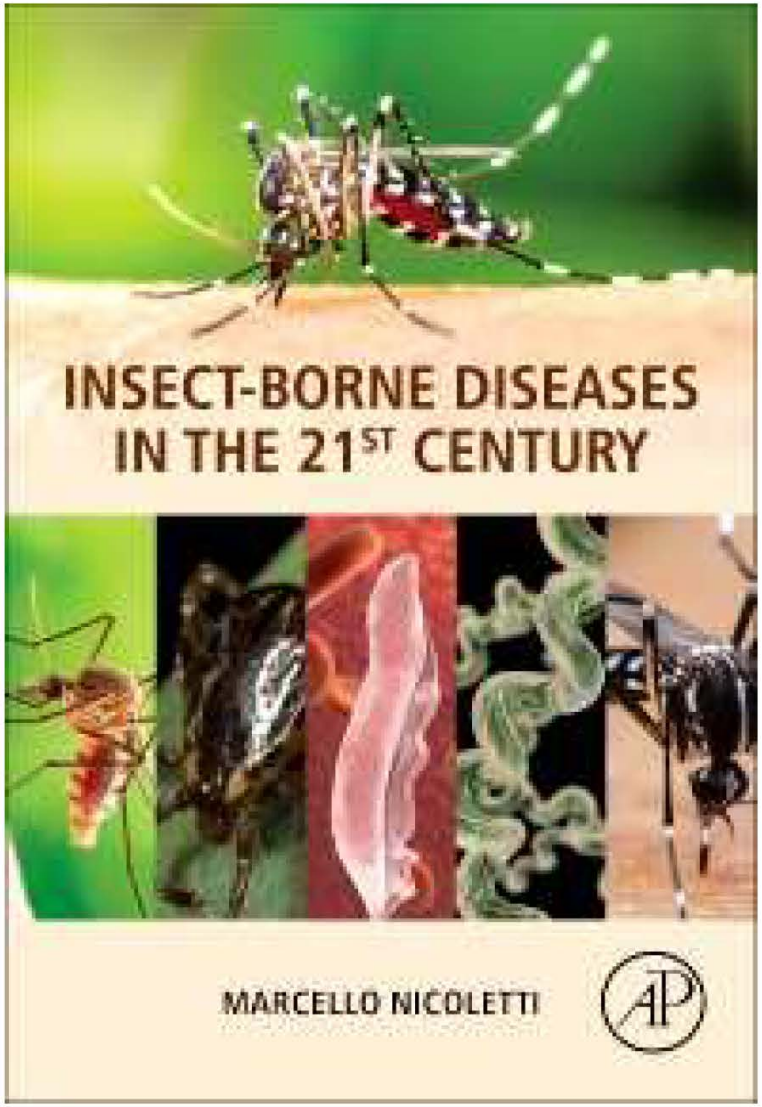


Insect Pheromone Biochemistry and Molecular Biology

Edition 2nd
Authors Gary Blomquist and Richard Vogt
978-0-12-819628-1
$ 200.00 DL

Description

Insect Pheromone Biochemistry and Molecular Biology, Second Edition, provides an updated and comprehensive review of the biochemistry and molecular biology of insect pheromone biosynthesis and reception. The book ties together historical information with recent discoveries, provides the reader with the current state of the field, and suggests where future research is headed. Written by international experts, many of whom pioneered studies on insect pheromone production and reception, this release updates the 2003 first edition with an emphasis on recent advances in the field. This book will be an important resource for entomologists and molecular biologists studying all areas of insect communication.

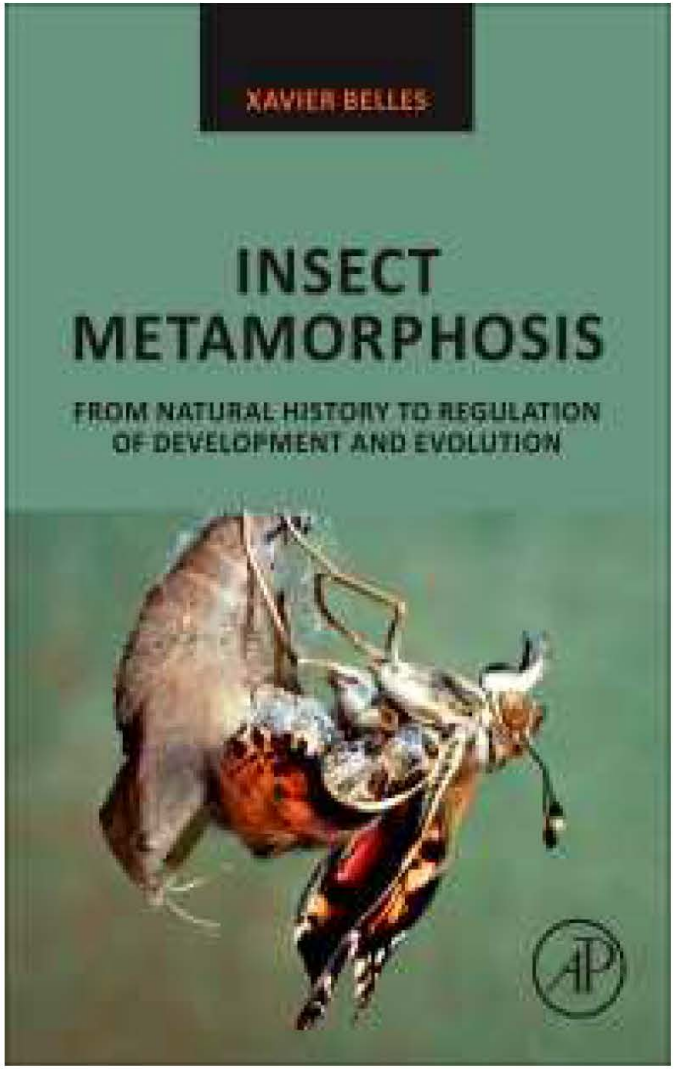


Insect-Borne Diseases in the 21st Century

Edition 1st
Author Marcello Nicoletti
978-0-12-818706-7
$ 120.00

Insect-Borne Diseases in the 21st Century provides a comprehensive look at the most notorious diseases carried by insects. It offers an assessment of current and potential insect-vectored diseases as they relate to human health and agricultural and livestock production. Written by a leading expert in insect-borne diseases, it examines the history of insect-borne diseases, beginning with those that have been well-known to scientists for decades, also including recent outbreaks like Zika. The book takes into consideration environmental conditions and climate change and explores the bionetworks and system biology of potential new superorganisms, offering preventative and protective solutions.

This is a must-have resource for entomology researchers and students who seek the most up-to-date information on disease-causing pathogens transmitted by insects. This book will also serve as a resource for ordinary people whose lives may be affected by such diseases.



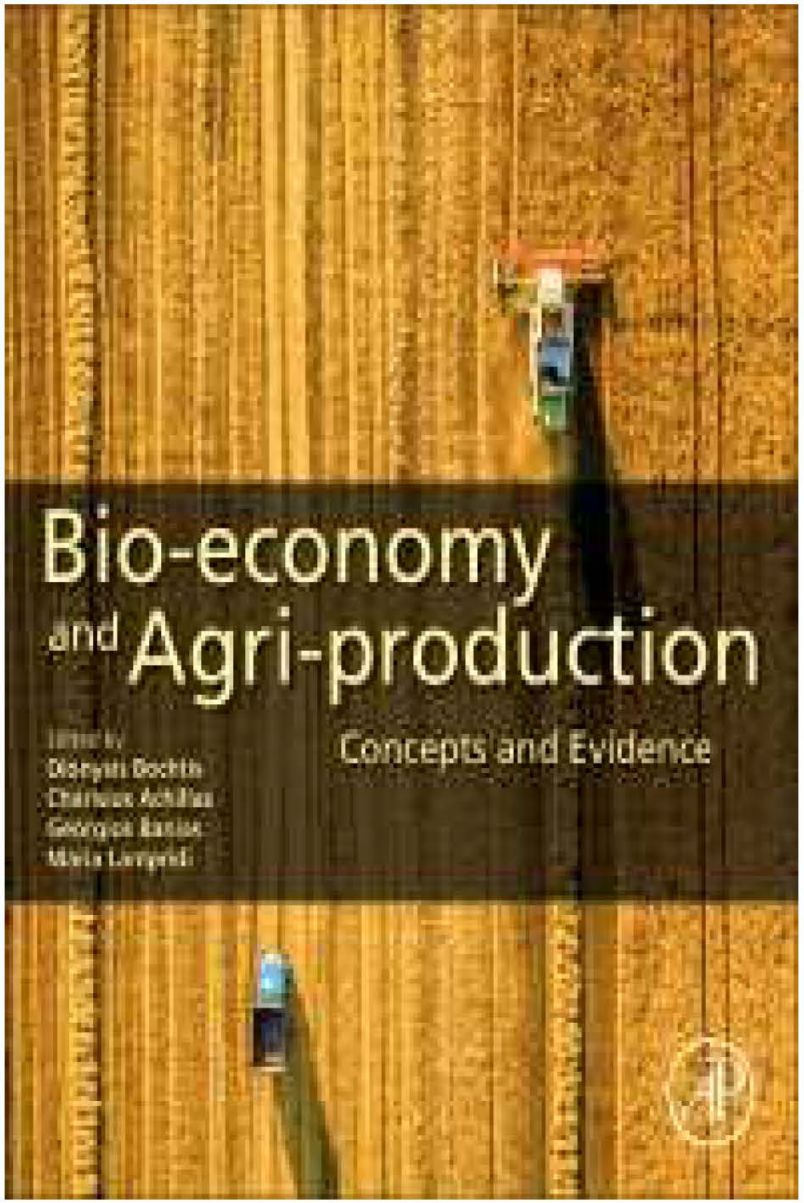
Insect Metamorphosis

Edition 1st
Author Xavier Belles
978-0-12-813020-9
120.00 DL

Description

Insect Metamorphosis: From Natural History to Regulation of Development and Evolution explores the origin of metamorphosis, how it evolved, and how it is it regulated. The book discusses insect metamorphosis as a key innovation in insect evolution. With most of the present biodiversity on Earth composed of metamorphosing insects—approximately 1 million species currently described, with another 10-30 million still waiting to be discovered, the book delves into misconceptions and past treatments. In addition, the topic of integrating insect metamorphosis into the theory of evolution by natural selection as noted by Darwin in his *On the Origin of Species* is also discussed.

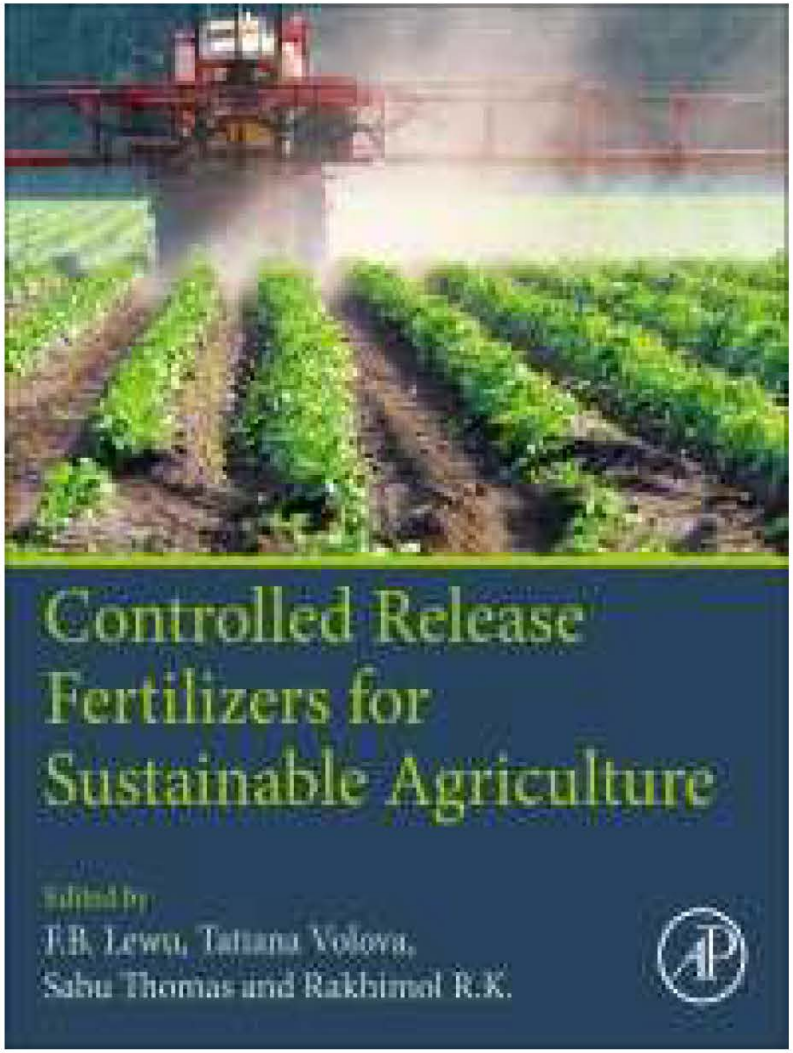
Users will find this to be a comprehensive and updated review on insect metamorphosis, covering biological, physiological and molecular facets, with an emphasis on evolutionary aspects.



Bio-economy and Agri-production

Edition 1st
Authors Dionysis Bochtis, Charisios Achillas and more
978-0-12-819774-5

Description
Bio-Economy and Agri-Production: Concepts and Evidence bridges the knowledge gap between sustainability and bio-economy aspects of agri-production. It complements traditional perspectives of agri-production with advanced engineering, information and communication technologies recently applied in agri-business. Including knowledgebased agriculture and reflecting sustainability and circular economy principles, the book presents a holistic view of sustainable bio-economy, contributing to the development of integrated agricultural systems. As technology advances, agricultural production management practices are now being called upon to address the need for sustainability in the bio-economy. Bio-Economy and Agri-Production: Concepts and Evidence presents information to broaden the awareness and promotion of practices and technology to reduce the use of inputs, protect health and environment and improve resource-use efficiency. Topics that are addressed include circular economy in agri-business, lifecycle thinking, lean management, agri-chains, green production, and waste management. Bio-Economy and Agri-Production: Concepts and Evidence is a valuable reference for professionals, consultants, and policy making stakeholders in biosystems engineering and agricultural industries

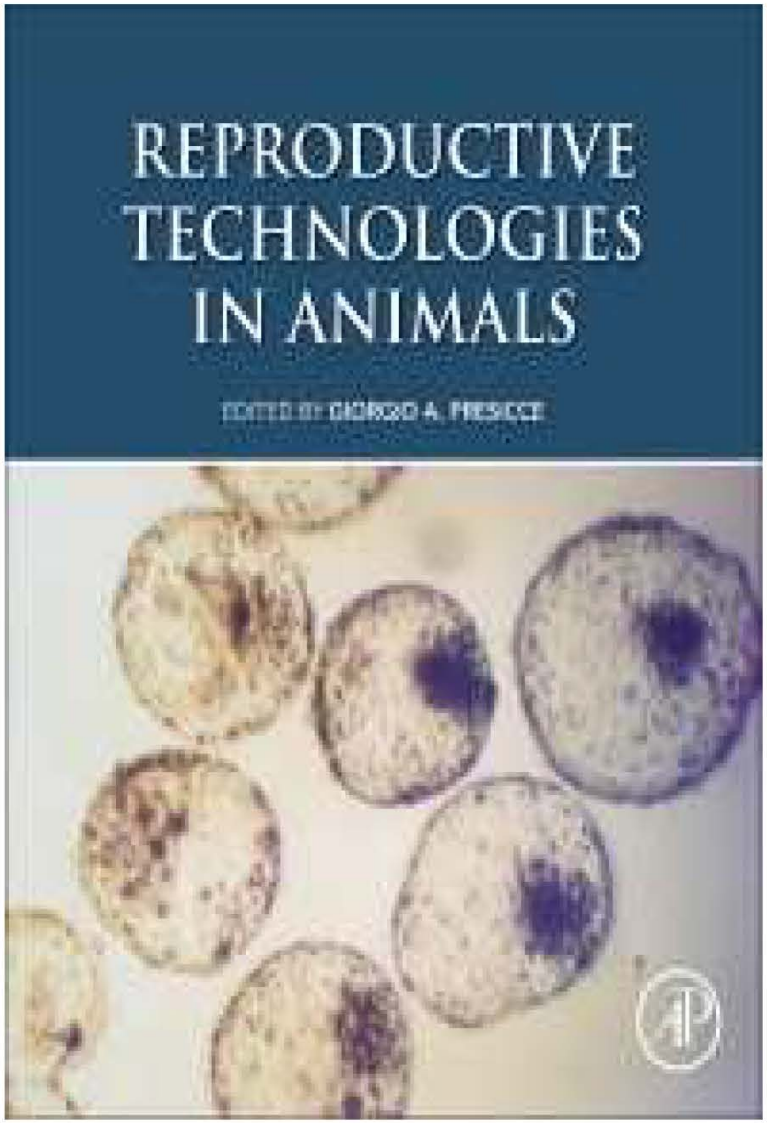


Controlled Release Fertilizers for Sustainable Agriculture

Edition 1st
Authors F.B Lewu, Tatiana Volova and more
ISBN: 9780128195550
125.00 DL
Description

Controlled Release Fertilizers for Sustainable Agriculture provides a comprehensive examination of precision fertilizer applications using the 4-R approach—the right amount of fertilizer at the right time to the right plant at the correct stage of plant growth. This volume consolidates detailed information on each aspect of controlled release fertilizers, including up-to-date literature citations, the current market for controlled release fertilizers and patents. Presenting the tremendous advances in experimental and theoretical studies on sustainable agriculture and related areas, this book provides in-depth insight into state-of-the-art controlled release mechanisms of fertilizers, techniques, and their use in sustainable agriculture.

Conventional release mechanisms have historically meant waste of fertilizers and the adverse effects of that waste on the environment. Controlled release delivery makes significant strides in enhancing fertilizer benefit to the target plant, while protecting the surrounding environment and increasing sustainability.

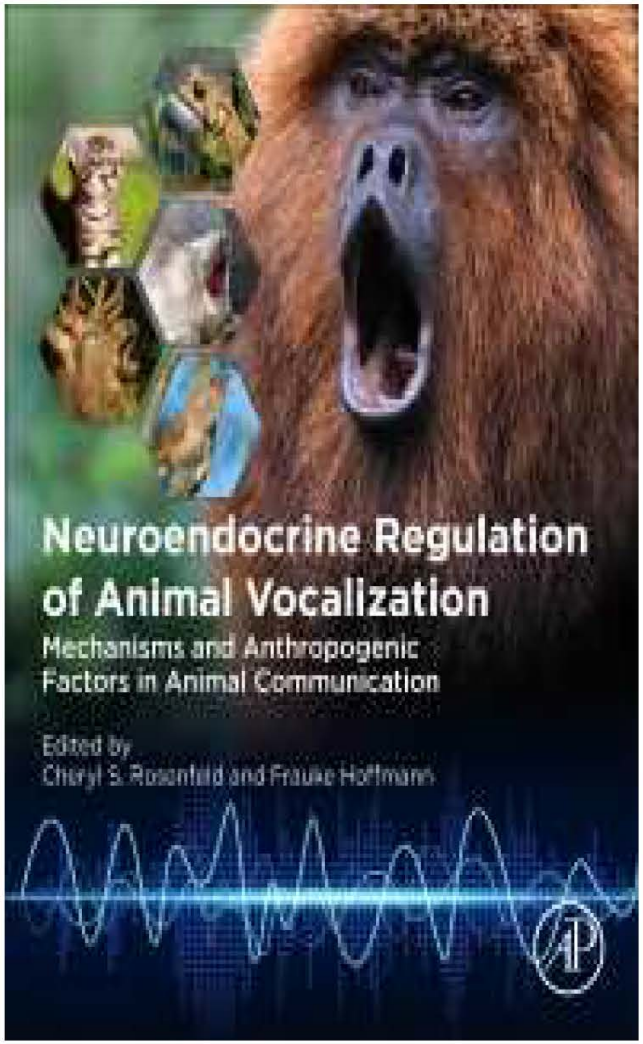


Reproductive Technologies in Animals

Edition 1st
Author Giorgio Presicce
ISBN:978-0-12-817107-3
$ 135.00 DL
Description

Reproductive Technologies in Animals provides the most updated and comprehensive knowledge on the various aspects and applications of reproductive technologies in production animals as well as companion, wild, exotic, and laboratory animals and birds. The text synthesizes historical information and recent discoveries, while dealing with economical and geographical issues related to the implementation of the same technologies. It also presents the effects of reproductive technology implementation on animal welfare and the possible threat of pathogen transmission.

Reproductive Technologies in Animals is an important resource for academics, researchers, professionals in public and private animal business, and students at the undergraduate and graduate levels, as it gives a full and detailed first-hand analysis of all species subjected to the use of reproductive technologies.

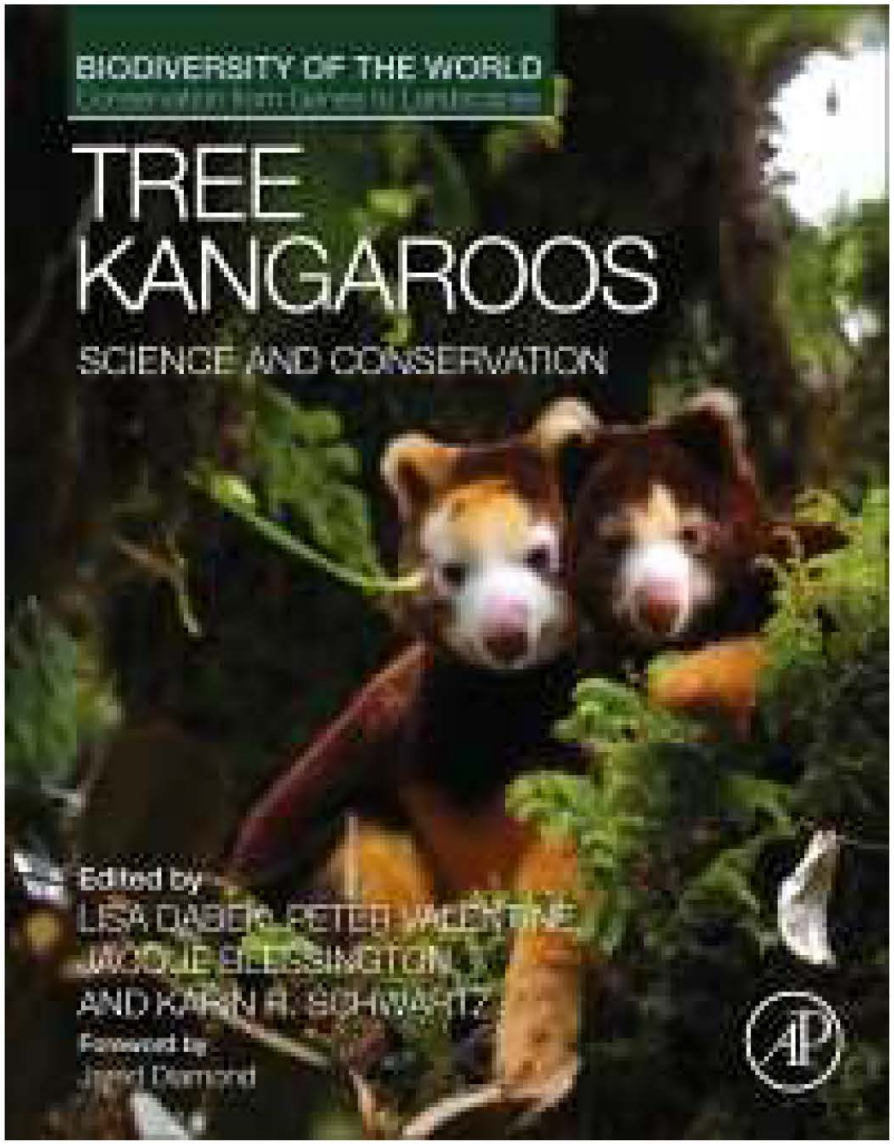


Neuroendocrine Regulation of Animal Vocalization

Edition 1st
Authors Cheryl Rosenfeld and Frauke Hoffmann
ISBN: 978-0-12-815160-0
$ 135.00 DL
Description

Neuroendocrine Regulation of Animal Vocalization: Mechanisms and Anthropogenic Factors in Animal Communication examines the underpinning neuroendocrine (NE) mechanisms that drive animal communication across taxa. Written by international subject experts, the book focuses on the importance of animal communication in survival and reproduction at an individual and species level, and the impact that increased production and accumulation of endocrine-disrupting chemicals (EDCs) can have on these regulatory processes.

This book discusses sound production, perception, processing, and response across a range of animals. This includes insects, fish, bats, birds, nonhuman primates, infant humans, and many others. Some chapters analyze how neuroactive substances, endocrine control, and chemical pollution affect the physiology of the animal's perceptive and sound-producing organs, as well as their auditory and vocal receptors and pathways. Other chapters address the recent approaches governments have taken to protect against the endocrine disruption of animal (vocal) behaviors. The book is a valuable resource for researchers and advanced students seeking first-rate material on neuroendocrinological effects on animal behavior and communication.

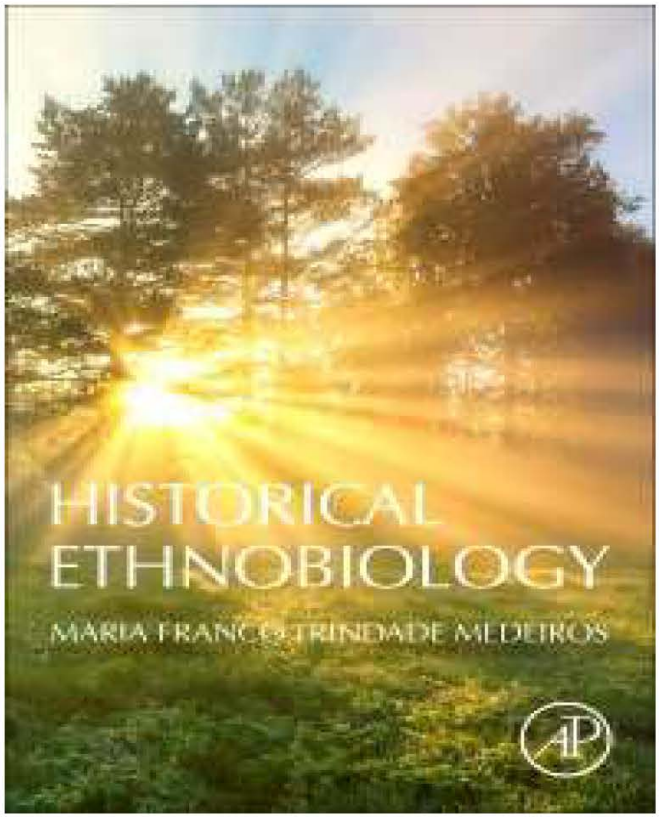


Tree Kangaroos

Edition 1st
Authors Lisa Dabek, Peter Valentine and more
ISBN:978-0-12-814675-0

Description

Tree Kangaroos: Science and Conservation, a volume in the Biodiversity of the World: Conservation from Genes to Landscapes series, provides an overview of tree kangaroo species and their relationship with humans. This exciting, interdisciplinary work on tree kangaroo science and conservation is divided into six major sections: (1) tree kangaroo evolution, genetics, taxonomy, ecology, behavior, and conservation status; (2) current and emerging threats to the species; (3) conservation programs in Australia and New Guinea with an emphasis on the human aspect of conservation; (4) the role of zoos in conservation solutions; (5) techniques and technologies to study this elusive marsupial; and (6) what is needed to keep tree kangaroos and their landscapes healthy in the future.

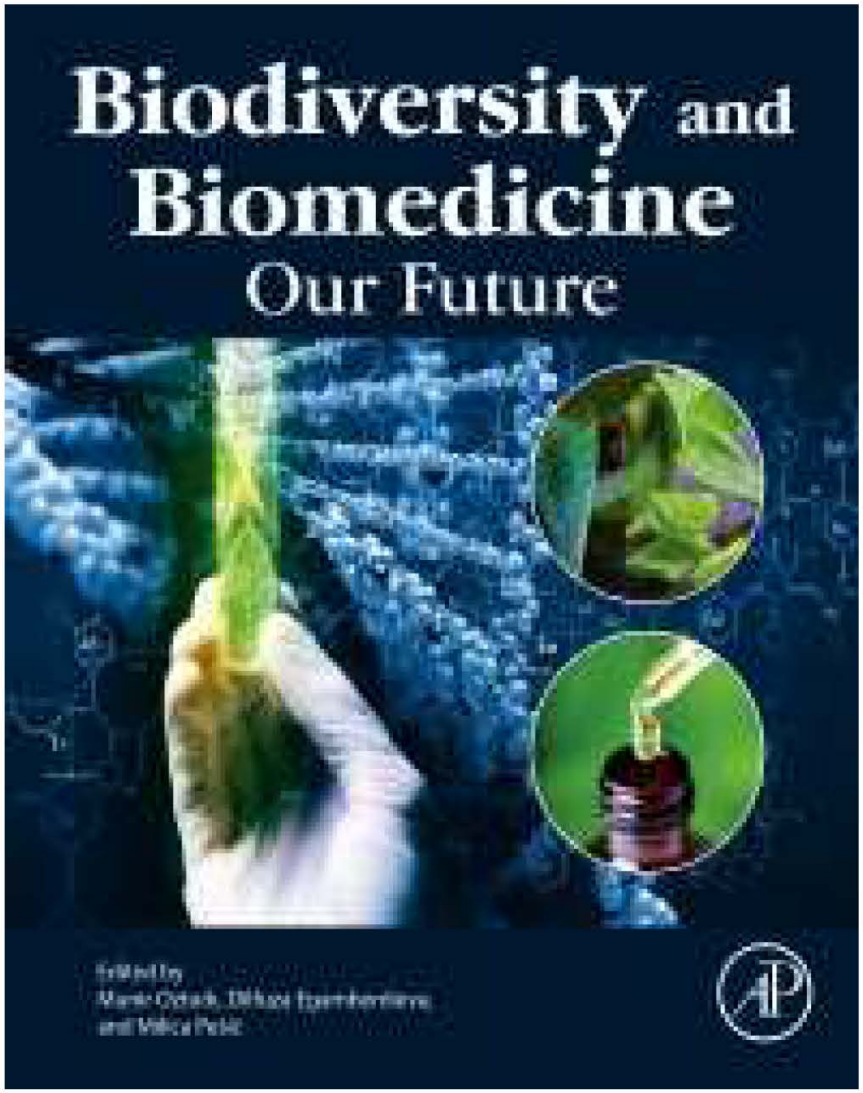


Historical Ethnobiology

Edition 1st
Author Maria Medeiros
ISBN:978-0-12-816245-3
$120.00 DL

Description

Historical Ethnobiology presents a unique approach to analyzing human-nature interactions, using theoretical and methodological aspects to examine historical scientific knowledge. This book disseminates the notion that past local narratives of biodiversity influence the determination of both historical and modern scientific decisions.



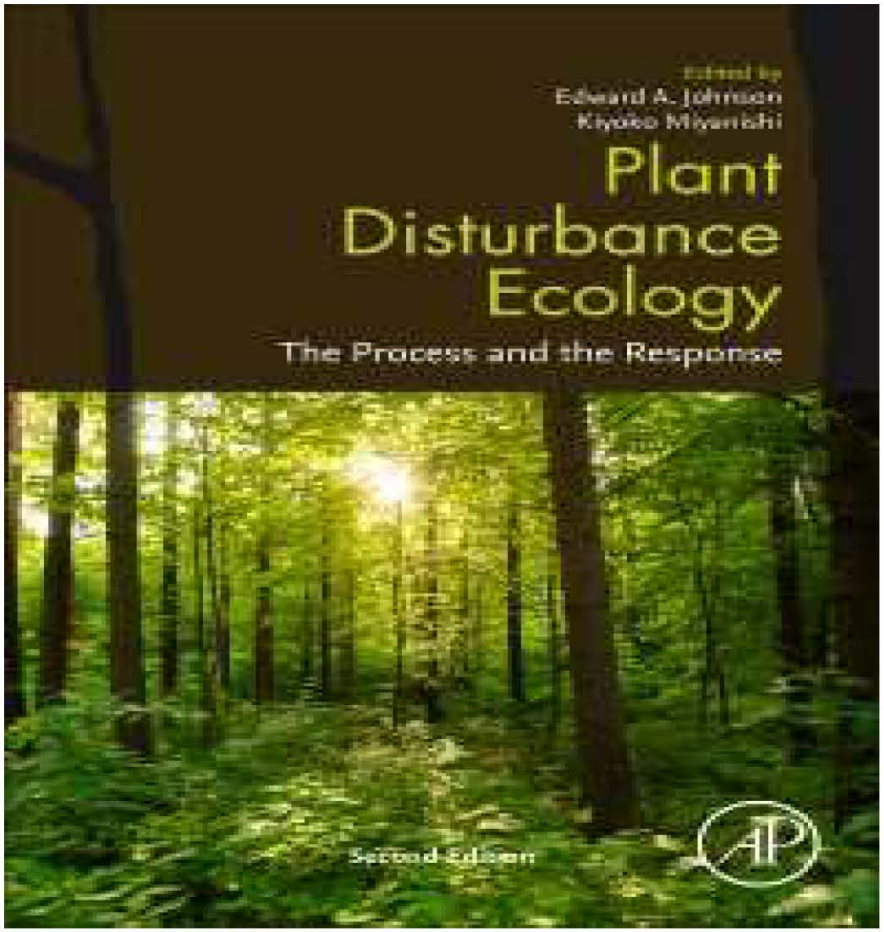
Biodiversity and Biomedicine

Edition 1st (2020)
Authors Munir Ozturk, Dilfuza Egamberdieva and Milica Pešić
ISBN: 978-0-12-819541-3
$150.00 DL

Description

Biodiversity and Biomedicine: Our Future provides a new outlook on Earth's animal, plant, and fungi species as vital sources for human health treatments. While there are over 10 million various species on the planet, only 2 million have been discovered and named. This book identifies modern ways to incorporate Earth's species into biomedical practices and emphasizes the need for biodiversity conservation.

Written by leading biodiversity and biomedical experts, the book begins with new insights on the benefits of biologically active compounds found in fungi and plants, including a chapter on the use of wild fruits as a treatment option. The book goes on to discuss the roles of animals, such as amphibians and reptiles, and how the threatened presence of these species must be reversed to conserve biodiversity. It also discusses marine organisms, including plants, animals, and microbes, as essential in contributing to human health.

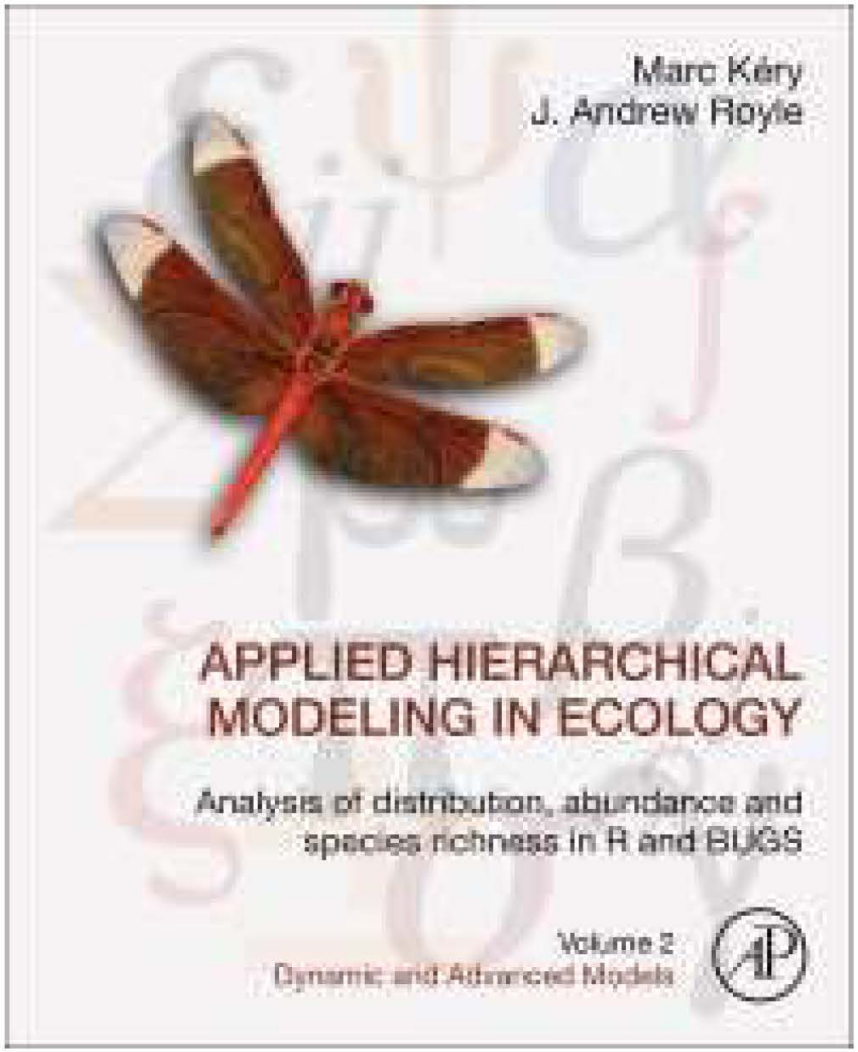


Plant Disturbance Ecology

Edition 2nd (2020)
Authors Edward Johnson and Kiyoko Miyanishi
ISBN: 978-0-12-818813-2
$ 150.00 DL

Description

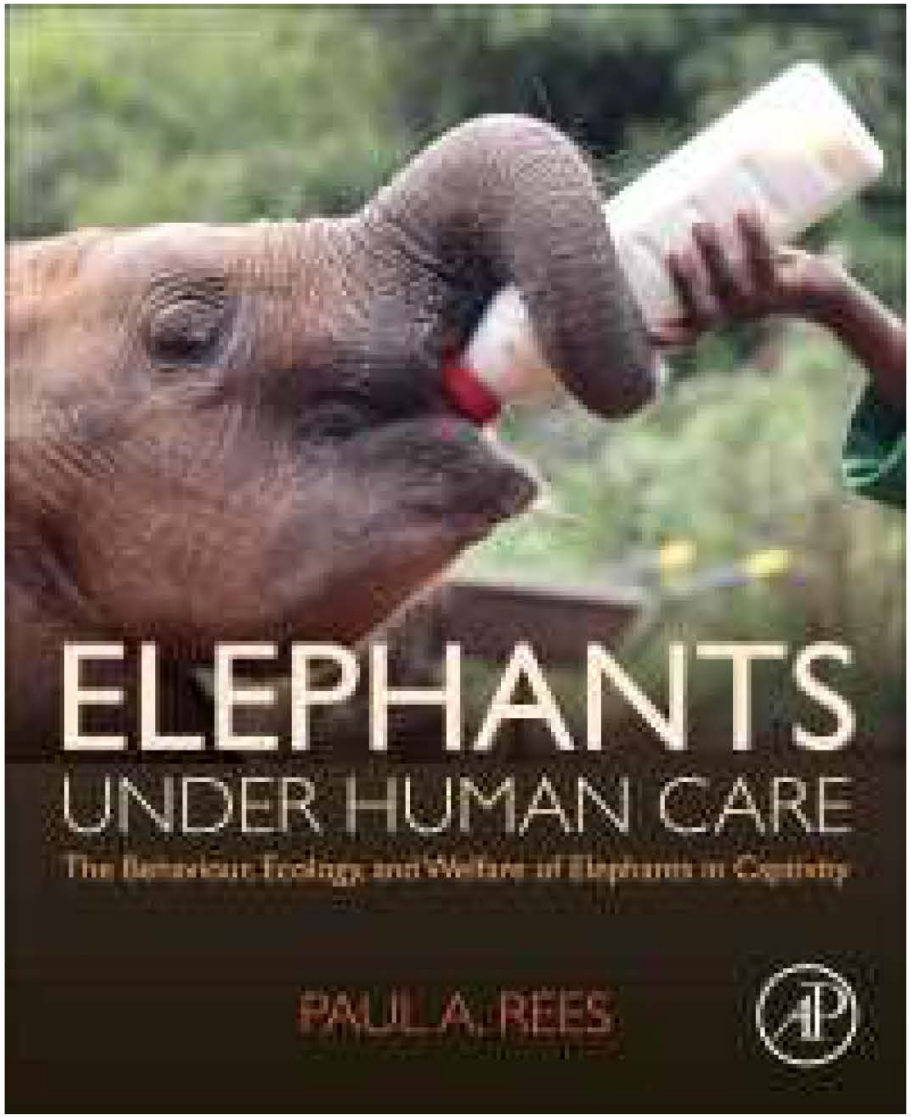
Disturbance ecology continues to be an active area of research, having undergone advances in many areas in recent years. One emerging direction is the increased coupling of physical and ecological processes, in which disturbances are increasingly traced back to mechanisms that cause the disturbances themselves, such as earth surface processes, mesoscale, and larger meteorological processes, and the ecological effects of interest are increasingly physiological



Applied Hierarchical Modeling in Ecology: Analysis of Distribution, Abundance and Species Richness in R and BUGS

Edition 1st (2020)
Authors Marc Kéry and J. Royle
ISBN:978-0-12-823768-7
$ 130.00 DL Description

Applied Hierarchical Modeling in Ecology: Analysis of Distribution, Abundance and Species Richness in R and BUGS, Volume Two: Dynamic and Advanced Models provides a synthesis of the state-of-the-art in hierarchical models for plant and animal distribution, also focusing on the complex and more advanced models currently available. The book explains all procedures in the context of hierarchical models that represent a unified approach to ecological research, thus taking the reader from design, through data collection, and into analyses using a very powerful way of synthesizing data.



Elephants Under Human Care

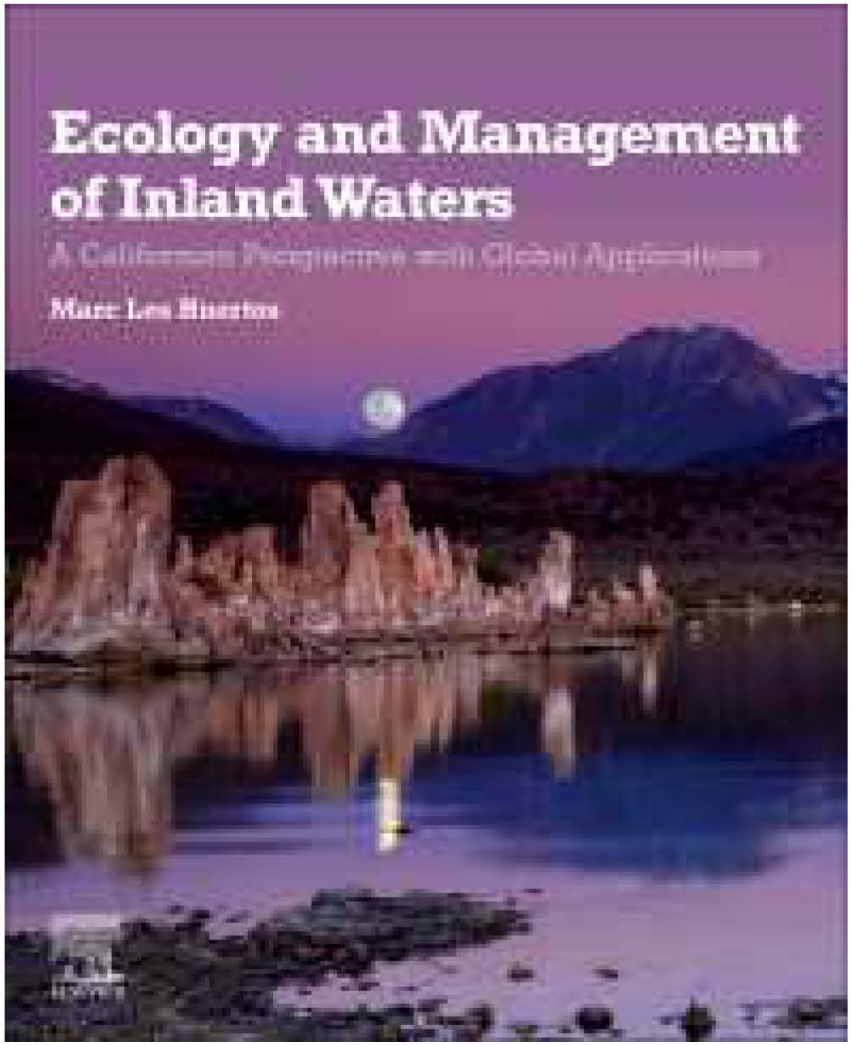
Edition 1st
Author Paul Rees
ISBN: 978-0-12-816208-8
$ 120.00

This book draws together, for the first time, the published research on the behaviour, ecology and welfare of elephants living in zoos, circuses, logging camps and other captive en…

Description

This book draws together, for the first time, the published research on the behaviour, ecology and welfare of elephants living in zoos, circuses, logging camps and other captive environments in a single comprehensive volume. It takes a multi-disciplinary approach, considering the work of zoo biologists, animal behaviour and welfare scientists, veterinarians, philosophers, zoo educators, tourism specialists, conservation biologists, lawyers and others with a professional interest in elephants.

Elephants under Human Care: The Behaviour, Ecology, and Welfare of Elephants in Captivity is a valuable resource for zoo biology and animal welfare researchers. It is also useful for students and zoo professionals and managers looking for a comprehensive guide to current research on captive elephants. Although not intended as a husbandry manual, the book discusses some of the elephant welfare standards developed by the Association of Zoos and Aquariums (AZA) and the British and Irish Association of Zoos and Aquariums (BIAZA) and their relationship to current knowledge of captive elephants.



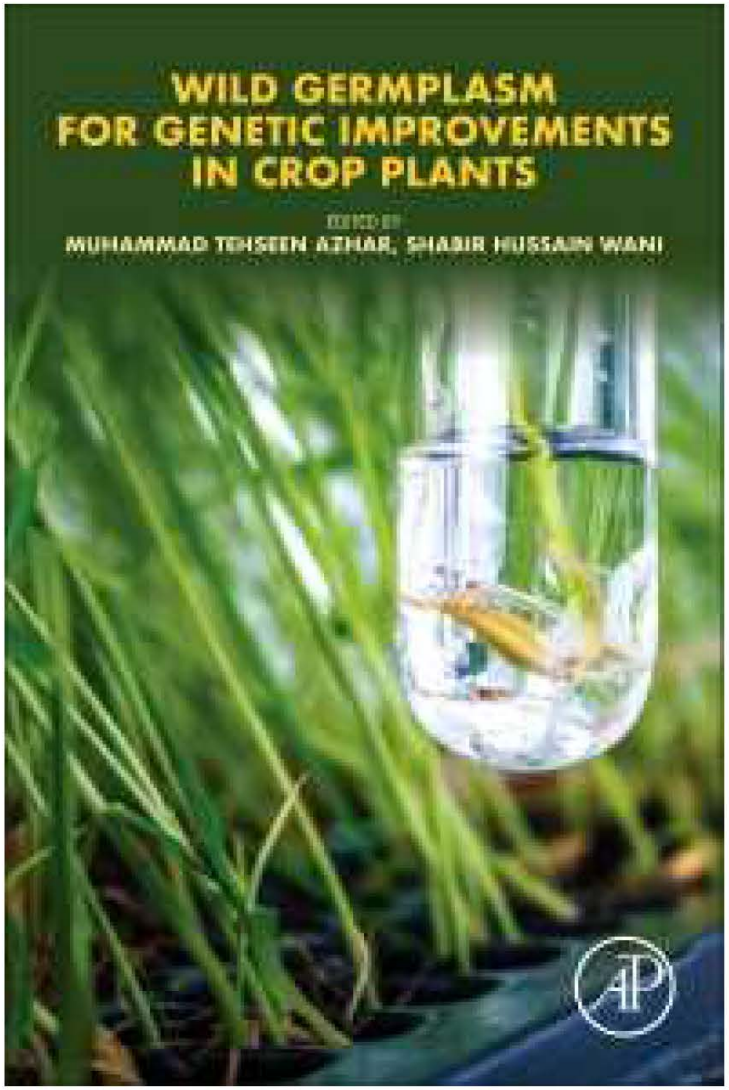
Ecology and Management of Inland Waters

Edition 1st
Author Marc Los Huertos
ISBN: 978-0-12-814266-0
$ 120.00 DL

Description

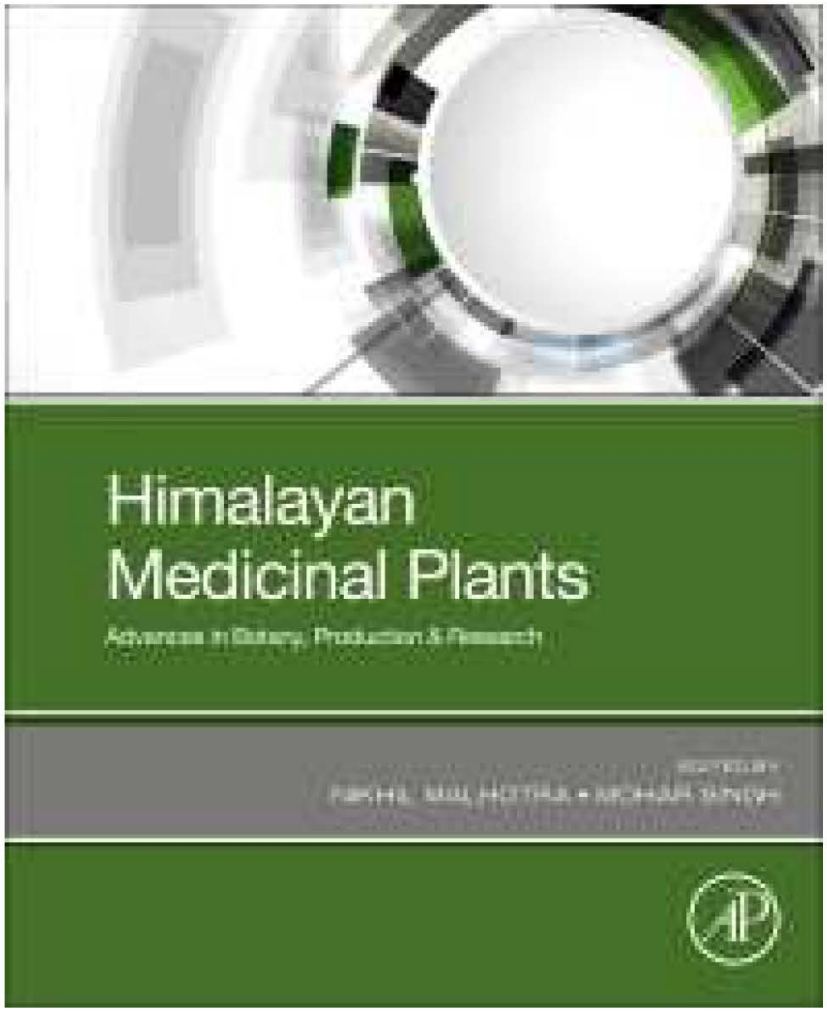
Ecology and Management of Inland Waters: A Californian Perspective with Global Applications presents the geologic history and physical characteristics of aquatic ecology. The author draws on his research from the inland waters of California and applies this to other areas, including Mediterranean climate systems, the tropics, and even South Africa. The endorheic basins covered in this text can be found in 30% of the US, including the Aral Sea, which is a fascinating case study that provides an important warning for other locations. The author also covers Zebra Mussels, which are set to soon be a permanent population in California.

The book is authored by an expert in the field who covers a very wide and interdisciplinary subject area which brings a holistic view to this complex discipline.



Wild Germplasm for Genetic Improvement in Crop Plants

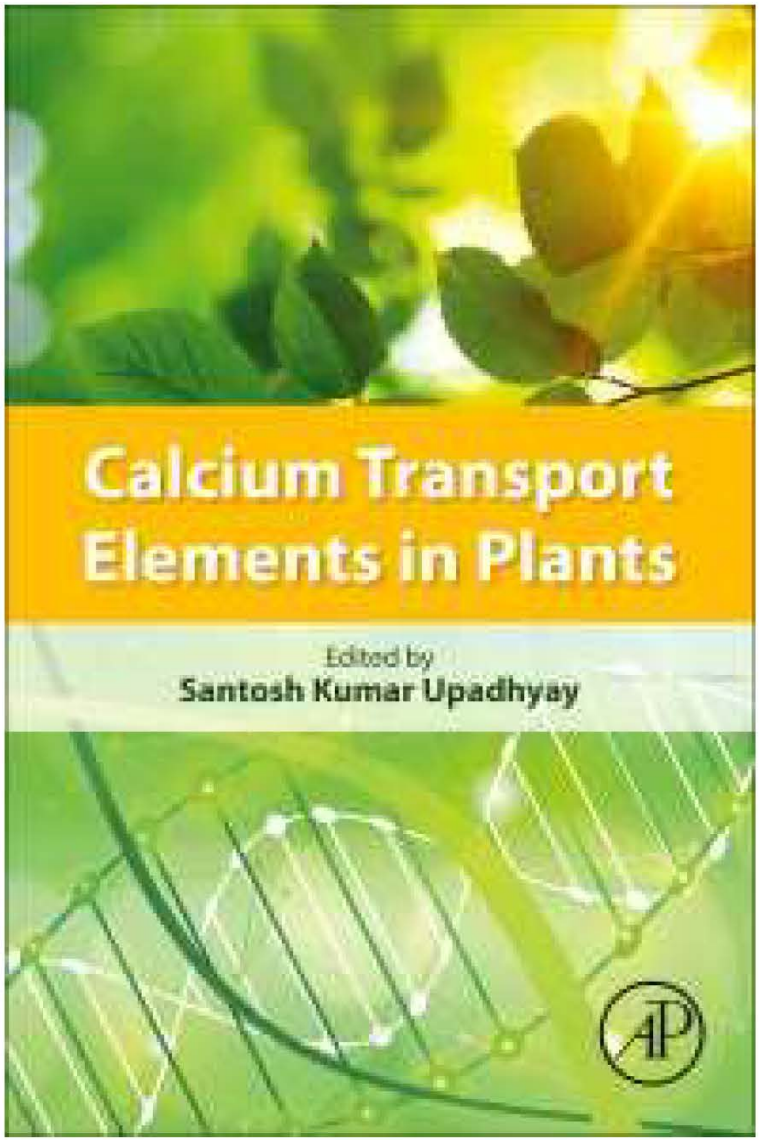
Edition 1st (2021)
Authors Muhammad Azhar and Shabir Wani
ISBN: 978-0-12-822137-2
$200.00 DL
Description
Wild Germplasm for Genetic Improvement in Crop Plants addresses the need for an integrated reference on a wide variety of crop plants, facilitating comparison and contrast, as well as providing relevant relationships for future research and development. The book presents the genetic and natural history value of wild relatives, covers what wild relatives exist, explores the existing knowledge regarding specific relatives and the research surrounding them and identifies knowledge gaps. As understanding the role of crop wild relatives in plant breeding expands the genetic pool for abiotic and biotic stress resistance, this is an ideal reference on this important topic.



Himalayan Medicinal Plants

Edition 1st (2021)
Authors Nikhil Malhotra and Mohar Singh
ISBN: 978-0-12-823151-7
$130.00 DL

Description
The Himalayan Region is a mega hot spot for biological diversity. It supports over 1,748 plants species of known medicinal value. This title focuses on origin and distribution of Himalayan herbs, their medicinal potential, industrial significance, and research advancements pertaining to molecular breeding and omics-based approaches.

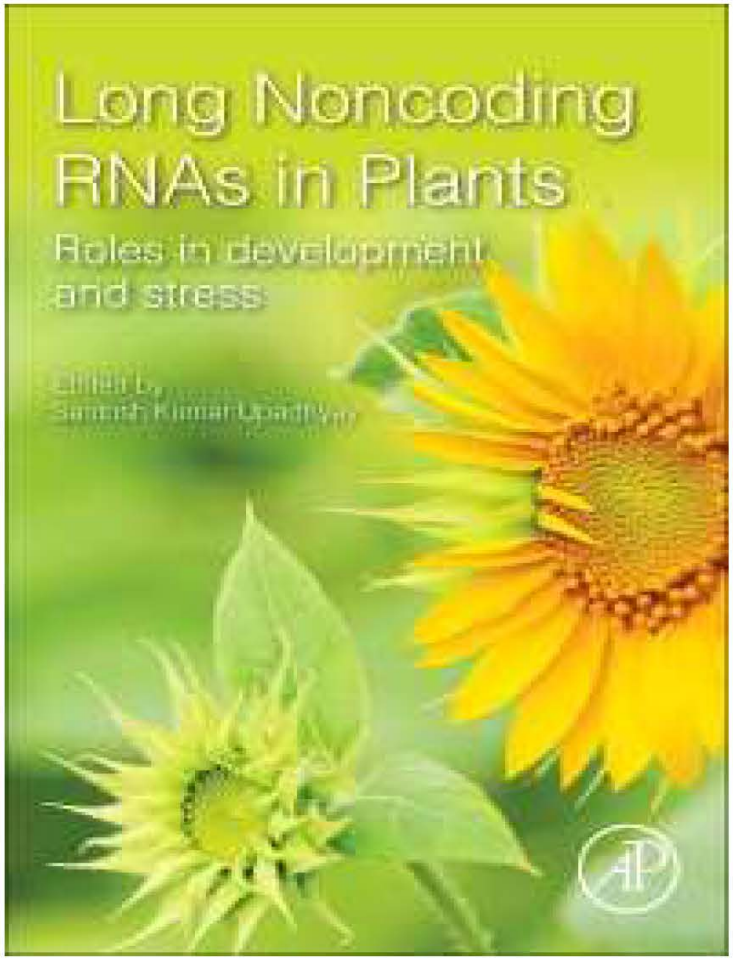


Calcium Transport Elements in Plants

Edition 1st (2021)
Author Santosh Upadhyay
ISBN: 978-0-12-821792-4
$ 210.00

Descripcion
Calcium Transport Elements in Plants discusses the role of calcium in plant development and stress signaling, the mechanism of Ca2+ homeostasis across plant membranes, and the evolution of Ca2+/cation antiporter (CaCA) superfamily proteins. Additional sections cover genome-wide analysis of Annexins and their roles in plants, the roles of calmodulin in abiotic stress responses, calcium transport in relation to plant nutrition/biofortification, and much more. Written by leading experts in the field, this title is an essential resource for students and researchers that need all of the information on calcium transport elements in one place.

Calcium transport elements are involved in various structural, physiological and biochemical processes or signal transduction pathways in response to various abiotic and biotic stimuli. Development of high throughput sequencing technology has favored the identification and characterization of numerous gene families in plants in recent years, including the calcium transport elements.

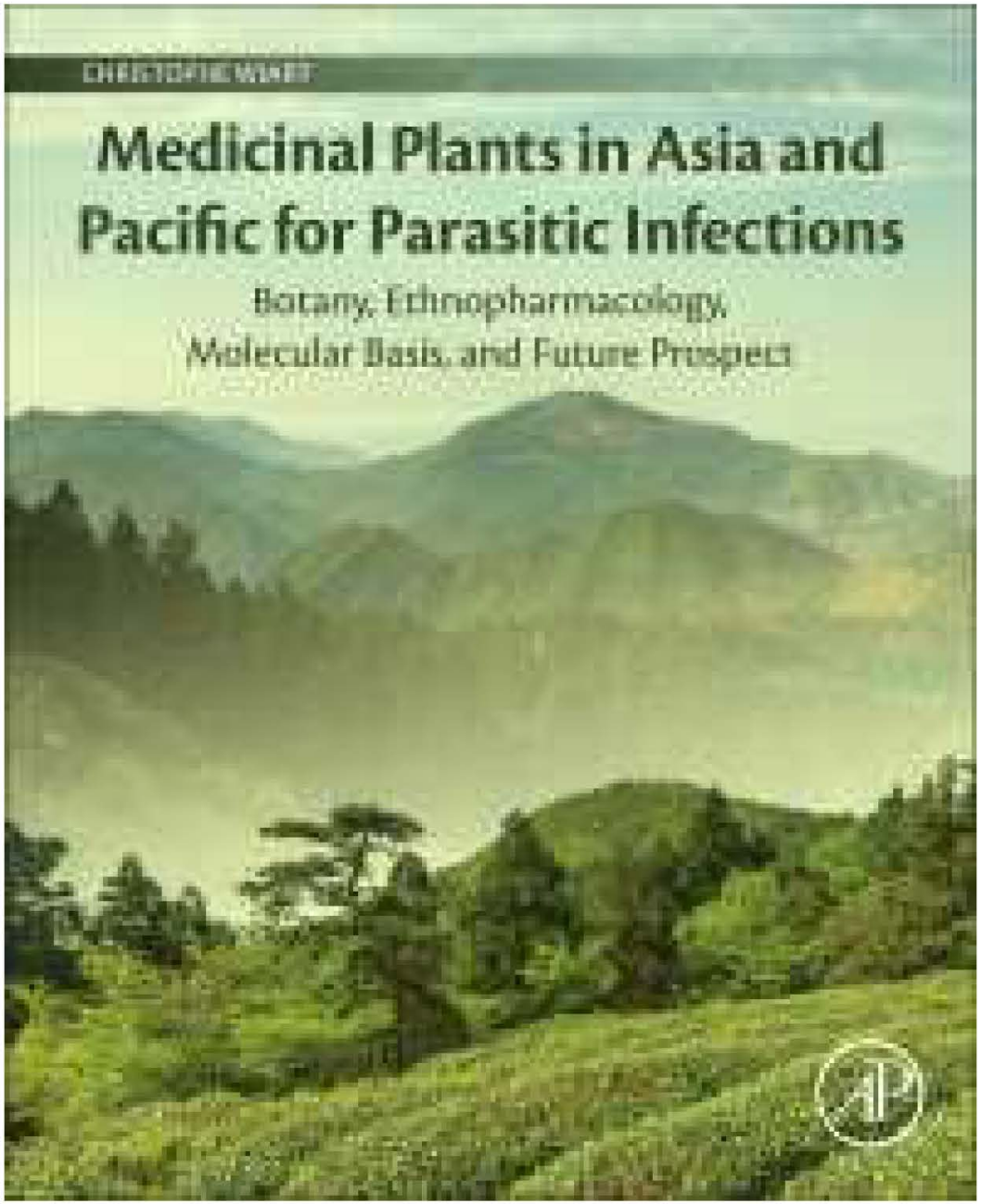


Long Noncoding RNAs in Plants

Edition 1st
Author Santosh Upadhyay
ISBN:978-0-12-821452-7
$200.00 DL

Description

The growth of human population has increased the demand for improved yield and quality of crops and horticultural plants. However, plant productivity continues to be threatened by stresses such as heat, cold, drought, heavy metals, UV radiations, bacterial and fungal pathogens, and insect pests. Long noncoding RNAs are associated with various developmental pathways, regulatory systems, abiotic and biotic stress responses and signaling, and can provide an alternative strategy for stress management in plants.

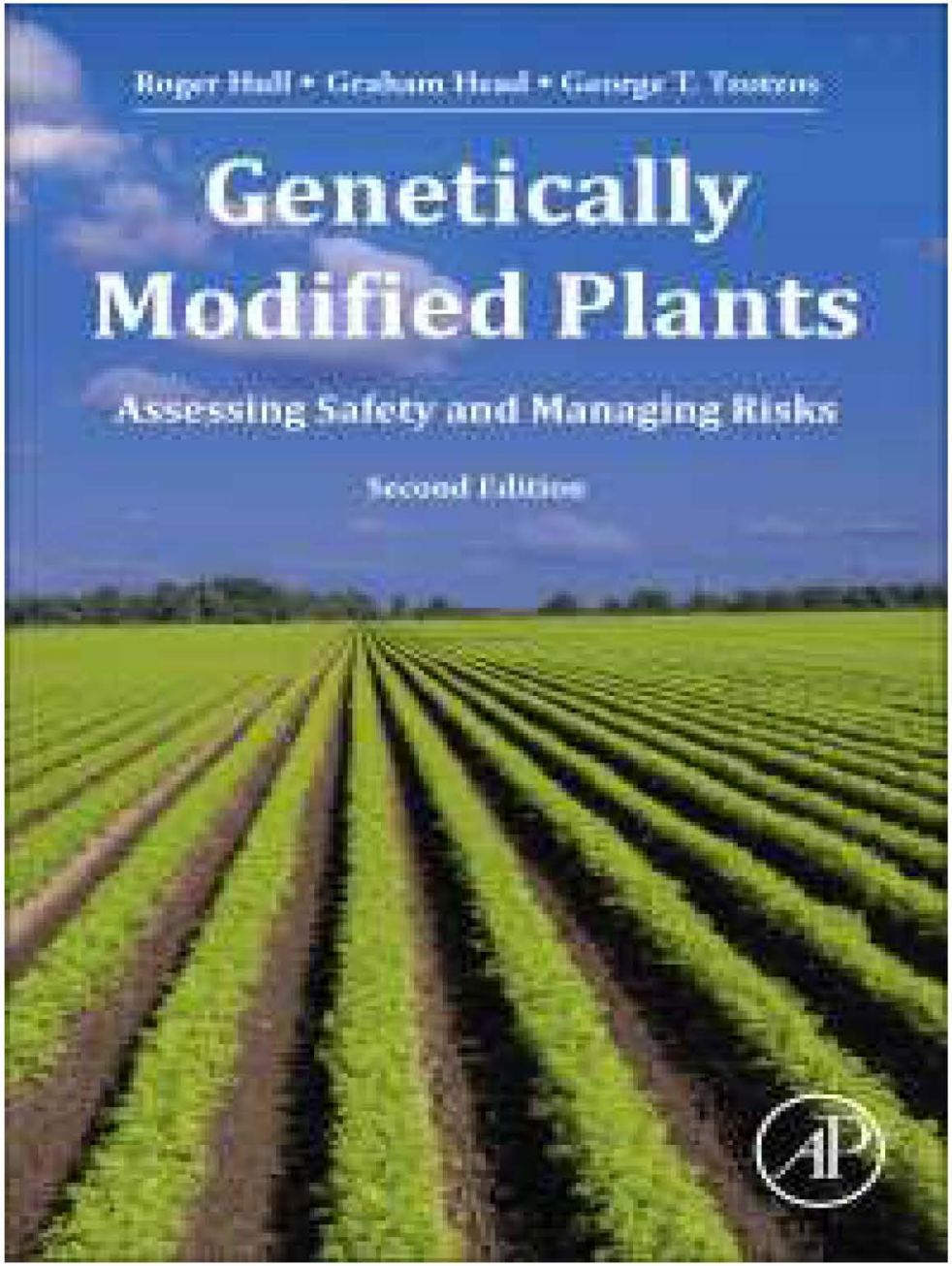


Medicinal Plants in Asia and Pacific for Parasitic Infections

Edition 1st (2020)
Author Christophe Wiart
ISBN:978-0-12-816811-0
$ 175.00 DL

Description

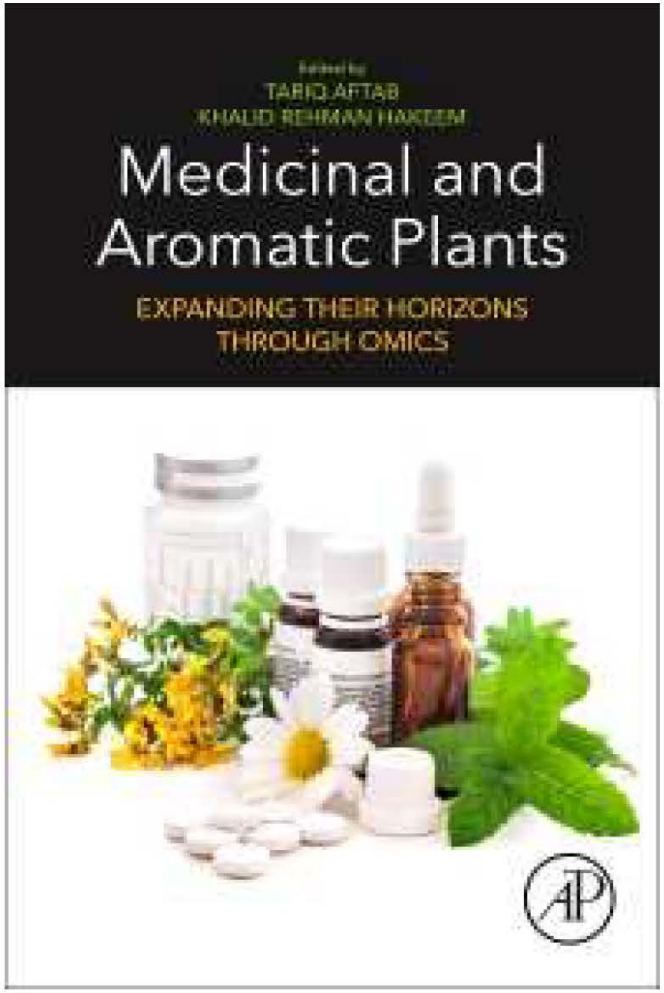
Medicinal Plants in Asia and Pacific for Parasitic Infections: Botany, Ethnopharmacology, Molecular Basis, and Future Prospect offers an in-depth view into antiprotozoal pharmacology of natural products from medicinal plants in Asia with an emphasis on their molecular basis, cellular pathways, and cellular targets. This book provides scientific names, botanical classifications, botanical description, medicinal uses, chemical constituents and antiprotozoal activity of more than 100 Asian medicinal plants, with high quality original botanical plates, chemical structures, and pharmacological diagrams and lists hundreds of carefully selected references. It also examines the pharmacological and medicinal applications of Asian medicinal plants especially in drug development for protozoan prevention and treatment. Medicinal Plants in Asia and Pacific for Parasitic Infections is a research tool and resource for the discovery of leads for the treatment of protozoal diseases based on interrelated botanical, biochemical, ethnopharmacological, phylogenetic, pharmacological, and chemical information.



Genetically Modified Plants

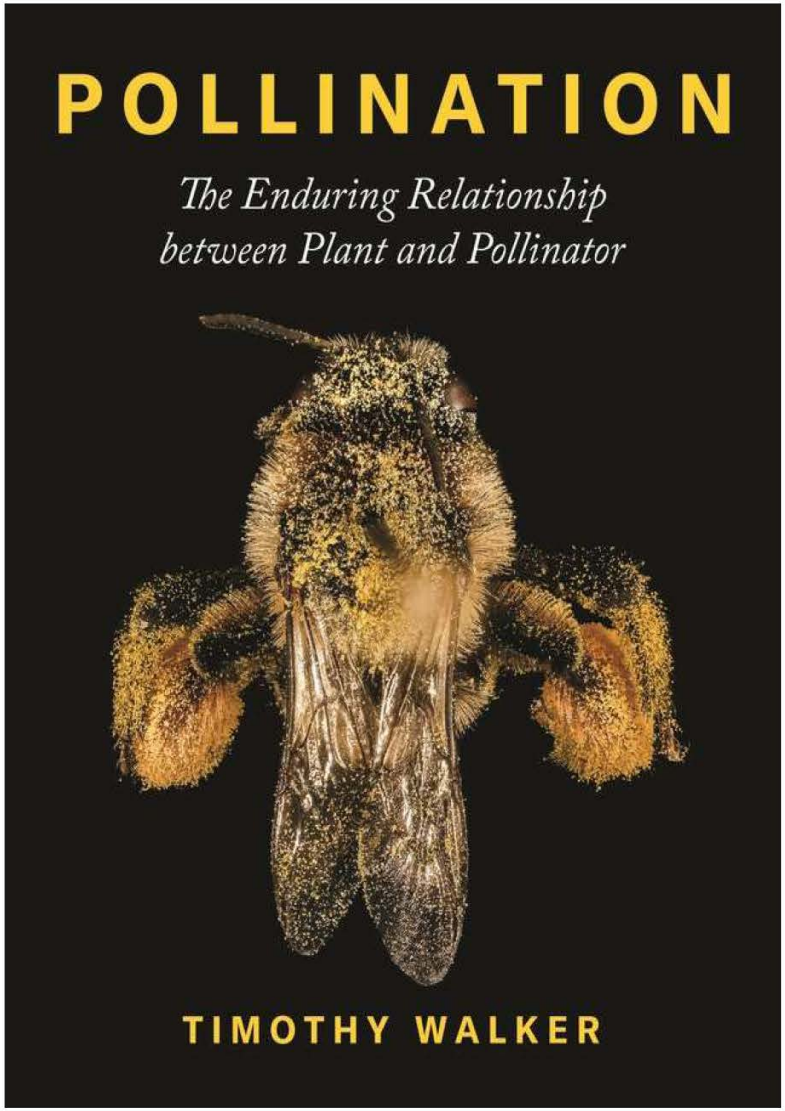
Edition 2nd
Authors Roger Hull, Graham Head and George Tzotzos

ISBN: 978-0-12-818564-3
$ 150.00 DL
Description
Genetically Modified Plants, Second Edition, provides an updated roadmap and science-based methodology for assessing the safety of genetic modification technologies, as well as risk assessment approaches from regulators across different agroecosystems. This new edition also includes expanded coverage of technologies used in plant improvement, such as RNA-dependent DNA methylation, reverse breeding, agroinfiltration, and gene-editing technologies such as CRISPR and TALENS. This book is an essential resource for anyone interested in crop improvement, including students and researchers, practitioners in regulatory agencies, and policymakers involved in plant biotechnology risk assessment.



Medicinal and Aromatic Plants

Edition 1st
Authors Tariq Aftab and Khalid Hakeem
ISBN: 978-0-12-819590-1
$ 200.00 DL
Description
Growing consumer interest in organic and herbal-based products has led to great demand in the botanicals industry in the past few years. However, the growing number of products utilizing medicinal and aromatic plants (MAPs) has threatened an estimated 9,000 medicinal plant species worldwide, making it critical to reevaluate their research and development, production, and utilization. Continuing advances in Omics methodologies and instrumentation are essential to understanding how plants cope with the dynamic nature of their growing environment, how yields and characteristics can be improved, and how to most effectively direct conservation efforts.
With a focus on metabolomics, genomics, proteomics, transcriptomics, and more, Medicinal and Aromatic Plants: Expanding Their Horizons through Omics illustrates the genetic mechanisms of MAPs, providing a better understanding of MAPs conservation and methods to improve characteristics for medical applications. With an introduction on the role of MAPs in human health, subsequent chapters discuss using proteomics to increase MAP yields and plant quality, genome editing, and CRISPR/Cas9. A valuable resource for farmers, scientists, chemists, biochemists, pharmacists, and students interested in medicinal and aromatic plants and plant biology, Medicinal and Aromatic Plants: Expanding Their Horizons through Omics ensures readers have the background knowledge to put the necessary methodologies into practice themselves.



Pollination: *The Enduring Relationship between Plant and Pollinator*

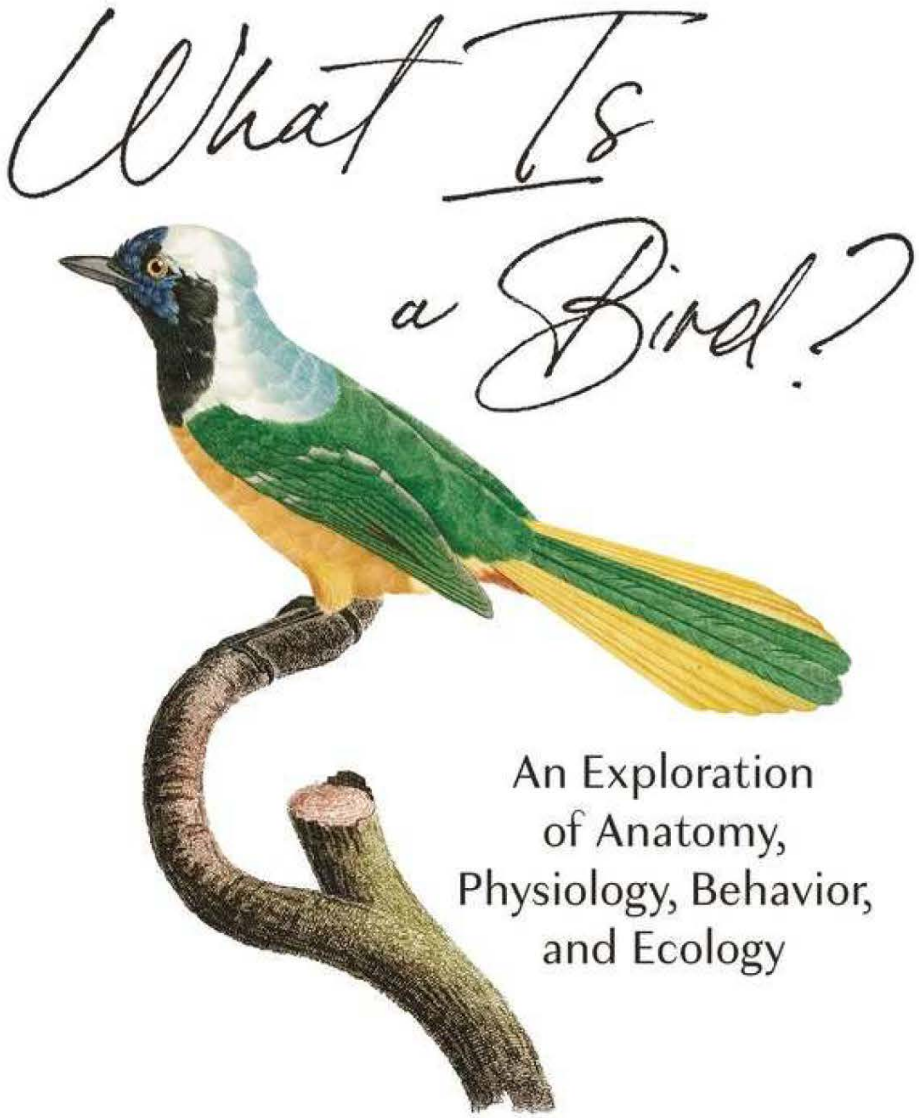
Timothy Walker

An enticing illustrated look at pollination, one of the most astonishing marvels of the natural world

$29.95
ISBN:9780691203751

2020 Pollination is essential to the survival of most plants on Earth. Some plants rely on the wind to transport pollen from one flower to another. Others employ an array of ingenious strategies to attract and exploit pollinators, whether they be insects, birds, or mammals. This beautifully illustrated book provides an unprecedented look at the wonders of pollination biology, drawing on the latest science to explain the extraordinarily complex relationship between plant and pollinator, and revealing why pollination is vital for healthy ecosystems and a healthy planet.

Timothy Walker offers an engaging introduction to pollination biology and explores the many different tactics of plant reproduction. He shows how wind and water can be effective yet wildly unpredictable means of pollination, and describes the intimate interactions of pollinating plants with bees and butterflies, beetles and birds, and lizards and bats. Walker explores how plants entice pollinators using scents, colors, and shapes, and how plants rely on rewards as well as trickery to attract animals. He sheds light on the important role of pollination in ecology, evolution, and agriculture, and discusses why habitat management, species recovery programs, and other conservation efforts are more critical now than ever.



What Is a Bird?: *An Exploration of Anatomy, Physiology, Behavior, and Ecology*

$35.00 DL
ISBN:9780691200163
2020

The Last Butterflies: *A Scientist's Quest to Save a Rare and Vanishing Creature*

- Nick Haddad

A remarkable look at the rarest butterflies, how global changes threaten their existence, and how we can bring them back from near-extinction

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THE LAST BUTTERFLIES

A SCIENTIST'S QUEST TO SAVE A RARE AND VANISHING CREATURE

NICK HADDAD

How to Clone a Mammoth: *The Science of De-Extinction*

Beth Shapiro

$18.95
ISBN:9780691217178
2021

An insider's view on bringing extinct species back to life

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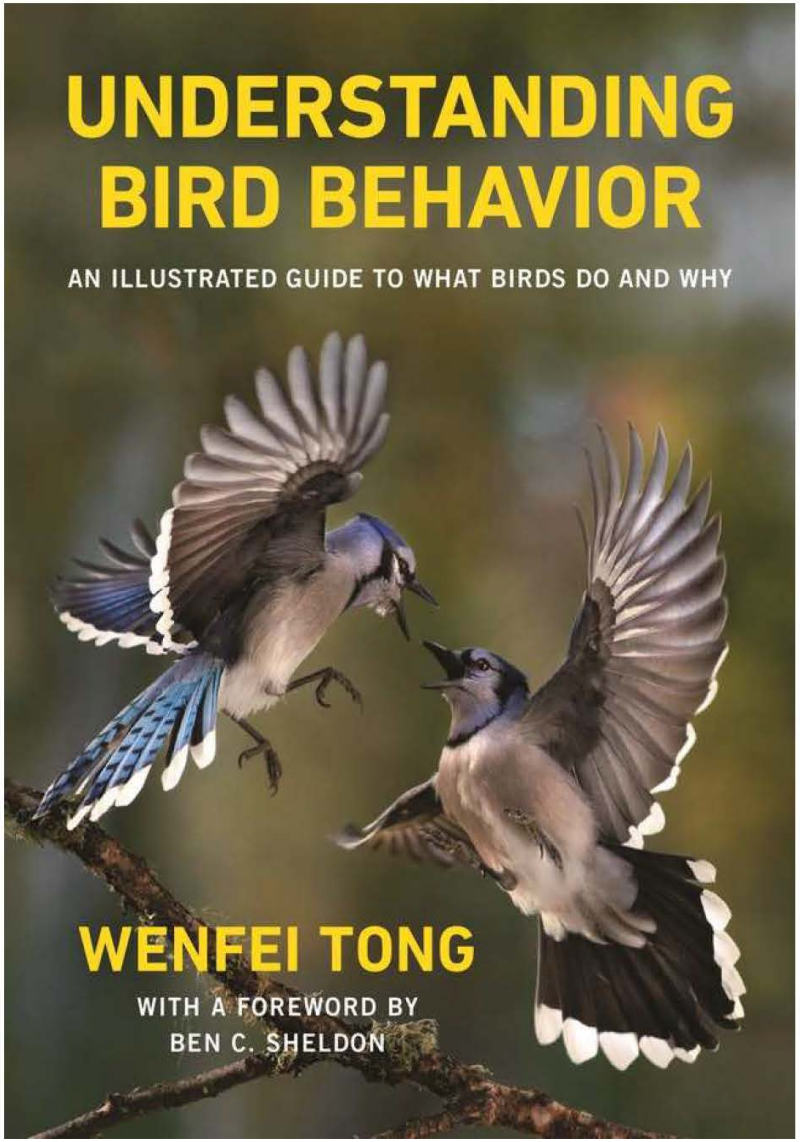


Understanding Bird Behavior: *An Illustrated Guide to What Birds Do and Why*

Wenfei Tong

Foreword by

Ben C. Sheldon

$27.95
ISBN: 9780691206004
Sep 22, 2020

Birds are intelligent, sociable creatures that exhibit a wide array of behaviors—from mobbing and mimicking to mating and joint nesting. Why do they behave as they do? Bringing to light the remarkable actions of birds through examples from species around the world, Understanding Bird Behavior presents engaging vignettes about the private lives of birds, all explained in an evolutionary context.

We discover how birds find food, relying on foraging techniques, tools, and thievery. We learn about the courtship rituals through which birds choose, compete for, woo, and win mates; the familial conflicts that crop up among parents, offspring, and siblings; and the stresses and strains of nesting, including territory defense, nepotism, and relationship sabotage. We see how birds respond to threats and danger—through such unique practices as murmurations, specific alarm calls, distraction displays, and antipredator nest design. We also read about how birds change certain behaviors—preening, migration, breeding, and huddling—based on climate. Richly illustrated, this book explores the increasing focus on how individual birds differ in personality and how big data and citizen scientists are helping to add to what we know about them.

Birds of Malaysia and Singapore

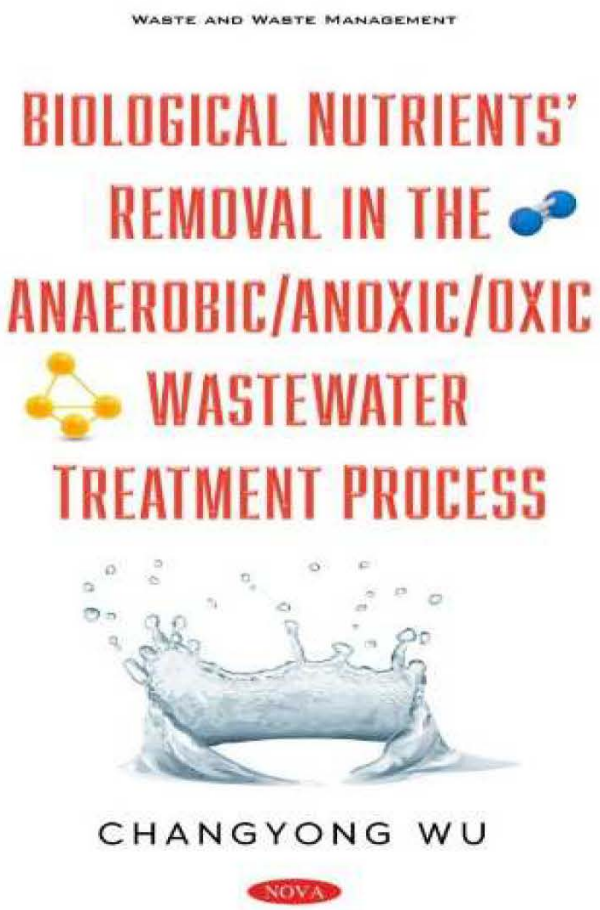
Lim Kim Seng, Yong Ding Li, and Lim Kim Chuah

Dana Gardner

$35.00
ISBN:9780691209906
Oct 20, 2020

This comprehensive field guide looks at all 829 officially recorded bird species of Malaysia and Singapore. More than 165 detailed color plates show plumage variation and identifying features, and for each species, key facts examine size, voice, range and status, habitat, specific country, and breeding. This book also includes information on taxonomy and nomenclature, an overview of geography and major habitats, key birdwatching sites with maps, and easy-to-use graphic indexes. This guide is essential for any naturalist interested in this region of the world.

Features all 829 bird species of Malaysia and Singapore
Includes 165 unique color plates
Highlights facts on size, voice, range, status, habitat, country, and breeding
Looks at taxonomy and nomenclature, geography, and key birding sites
Biological Nutrients' Removal in the Anaerobic/Anoxic/Oxic Wastewater Treatment Process



BIOLOGICAL NUTRIENT'S REMOVAL IN THE ANAEROBIC/ANOXIC/OXICWASTEWATER TRATMENT PROCESS

Changyong Wu

Publication Date: March 17, 2021
978-1-53619-080-9

Anaerobic-anoxic-oxic (A2/O) is one of the most widely used processes in municipal wastewater treatment plants for simultaneous biological nitrogen and phosphorus removal. The A2/O process has many advantages, such as simple configuration and short hydraulic retention time (HRT), etc. In addition, it is easy to operate. Therefore, A2/O will be continuously chosen as the main option in all kinds of newly designed and built wastewater treatment plants. Though the A2/O process has been used widely, it has some inherent contradictions which are difficult to overcome. For example, the contradiction between substrate competition and SRT makes the high nitrogen and phosphorus removal unable to be achieved simultaneously. As a result, the removal efficiency of the system cannot be further improved. In the past 10 years in China, the wastewater quality very obviously changed with the improvement of living conditions. At present, municipal wastewater with a low C/N ratio is rather common in most countries in the world. The lack of a carbon source will make the inherent contradictions of the A2/O process becomes serious. Therefore, the conventional design parameters of the A2/O process are needed to adjust or the configuration of the A2/O process should change to fit the change of the wastewater quality. According to this, this book systematically describes how to improve the nitrogen and phosphorus removal efficiency of municipal wastewater with low C/N ratio, and effectively utilize the carbon resource in the influent of wastewater. This publication is useful for students, researchers and engineers whose major focus is municipal and the environment.

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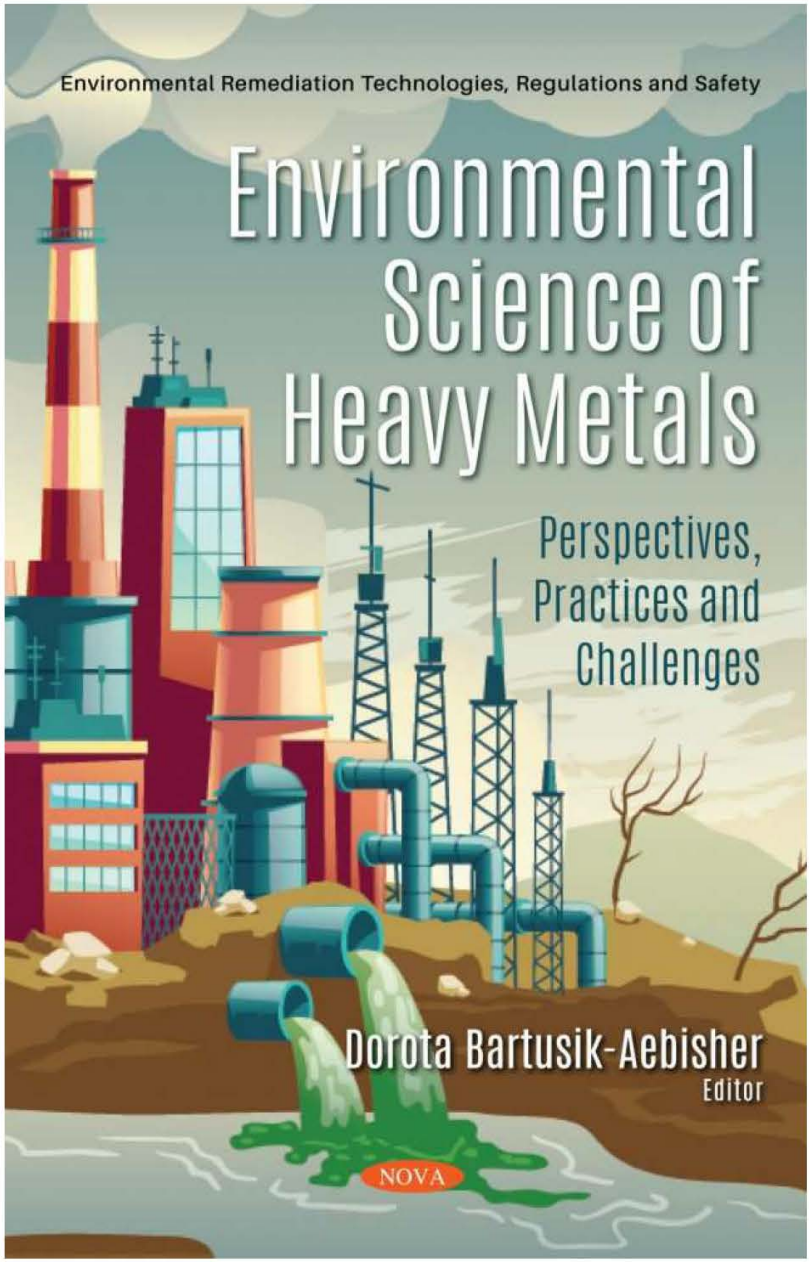
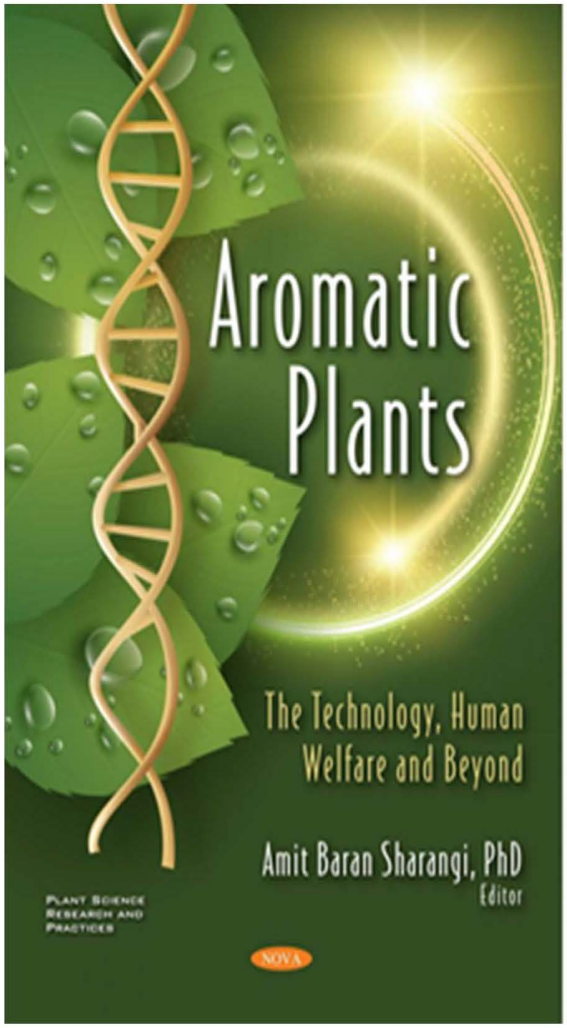


Environmental Science of Heavy Metals

Dorota Bartusik-Aebisher
978-1-53617-831-9
Publication Date: May 2020

This book provides a current review of the problem of heavy metal removal. Microorganisms and microbial activity in environments of water and soil are presented in Chapter 1. Chapter 2 covers current knowledge about photoactive materials based on porphyrins. This book reports the manner in which plants interact with heavy metals dependent mainly on the type of contamination, species of plant as well as conditions. The book presents biological strategies for the elimination of heavy metals from polluted habitats—phytoextraction, phytostabilization, phytodegradation, phytostimulation, phytovolatilization and phytofiltration. Also included are analytical methods to determine heavy metals in water such as atomic absorption spectrometry, electrochemical methods, colorimetric and chromatographic techniques



Aromatic Plants: The Technology, Human Welfare and Beyond

Dr. Amit Baran Sharangi
Publication Date: April 2021
978-1-53619-322-0
$ 230.00 DL

he history of aroma and fragrance dates back through several ages and civilizations. The sagacity of smell plays a remarkable role for human beings to recognize food. Best fruits can be judged when they are ripe and fit for consumption emitting lovely smell or aroma. The same attribute from flowers attracts insects leading to cross-pollination. India has enjoyed a paramount place in the fabrication of quality perfumes and aromatics since the prehistoric era. The celebrated Chinese voyager Fa-Hien described India as the land of aromatic plants. Indian cities like Delhi, Agra, Kannauj, Lucknow, Jaunpur, Ghazipur, Aligarh, Bharatpur, Mysore, and Hyderabad emerged as centers of national and international trade in perfumery and other aromatic compounds, and were known for their quality across Asia, Europe and Africa. Aromatic plants precisely possess odorous volatile substances in root, wood, bark, stem, foliage, flower and fruit. The typical aroma is due to an assortment of composite chemical compounds. At present, information on the chemistry and properties of essential oils of only about 500 aromatic plants species is known in some detail out of a total of about 1500. Of these, about 50 species find use as commercial source of essential oils and aroma chemicals. It is realized now that perfumes are not the essentials of sumptuousness as they were in the past. It has given birth to new streams of medicinal therapy, aromatherapy, involving the use of essential oils and aromatics derived from plants to treat diseases. Essential oils are also reported to be better than antibiotics due to their safety and broad-spectrum activity. Natural essential oils are also potentially safe insecticides. The essential oil obtained from Acorus calamus having ß-asarone as an active principle produces sterility among a variety of insects of either sex. It has, therefore, been found very useful and secure for the storage of food grains. However, there is still very inadequate research for the cultivation of aromatic crops and extraction of essential oils across the globe.