An Introduction To Pteridophyta Diversity And Differentiation

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An Introduction to Pteridophyta - A. Rashid 1999

Morphology of Gymnosperms - John Merle Coulter 1910

Comparative and Evolutionary Genomics of Angiosperm Trees - Andrew Groover 2017-11-21
Marking the change in focus of tree genomics from single species to comparative approaches, this book covers biological, genomic, and evolutionary aspects of angiosperm trees that provide information and perspectives to support researchers broadening the focus of their research. The diversity of angiosperm trees in morphology, anatomy, physiology and biochemistry has been described and cataloged by various scientific disciplines, but the molecular, genetic, and evolutionary mechanisms underlying this diversity have only recently been explored. Excitingly, advances in genomic and sequencing technologies are ushering a new era of research broadly termed comparative genomics, which simultaneously exploits and describes the evolutionary origins and genetic regulation of traits of interest. Within tree genomics, this research is already underway, as the number of complete genome sequences available for angiosperm trees is increasing at an impressive pace and the number of species for which RNAseq data are available is rapidly expanding. Because they are extensively covered by other literature and are rapidly changing, technical and computational approaches—such as the latest sequencing technologies—are not a main focus of this book. Instead, this comprehensive volume provides a valuable, broader view of tree genomics whose relevance will outlive the particulars of current-day technical approaches. The first section of the book discusses background on the evolution and diversification of angiosperm trees, as well as offers description of the salient features and diversity of the unique physiology and wood anatomy of angiosperm trees. The second section explores the two most advanced model angiosperm tree species (poplars and eucalypts) as well as species that are soon to emerge as new models. The third section describes the structural features and evolutionary histories of angiosperm tree genomes, followed by a fourth section focusing on the genomics of traits of biological, ecological, and economic interest. In summary, this book is a timely and well-referenced foundational resource for the forest tree community looking to embrace comparative approaches for the study of angiosperm trees.
Bibliography of Agriculture - 1975-07

Introduction to Bryophytes - Alain Vanderpoorten 2009-05-28

Bryophytes were a pivotal step in land plant evolution, and their significance in the regulation of ecosystems and the conservation of biodiversity is becoming increasingly acknowledged. This introductory textbook assumes no prior knowledge of bryophyte biology, making it ideal for advanced undergraduate and graduate students, as well as amateur botanists. The authors expertly summarise the diversity of bryophytes and outline recent advances in our understanding of their evolutionary history, their ecological roles and preferences, their distribution patterns and conservation needs. The text is highly illustrated throughout, with boxed summaries of topics of current relevance in bryophyte biology, and a glossary of technical terms.

A Textbook of Botany Volume - II, 13th Edition - Pandey S.N./ Misra S.P. & Trivedi P.S.

During its 40 years of existence A Textbook of Botany, a multi-volume work, has established itself as a student-friendly book that explains the intricacies of botany in a very simple and interesting manner. The book was originally written for undergraduate students but over the years it has also proved helpful to postgraduates and those taking competitive examinations. The book has been revised extensively to include the latest discoveries and innovations in botany.NEW IN THIS EDITION• Life cycles of Osmunda, Adiantum and Gleichenia added.• Topics like "Bryophyta as Indicators of Pollution" and "Peristome in Bryales" added.• New and bigger format.

Vascular Epiphytes - David H. Benzing 2008-01-07

Epiphytes (plants which grow on other plants, not parasitically but for support), comprise more than one-third of the total vascular flora in some tropical forests. Growing within tropical forest canopies, epiphytes are subject to severe environmental constraints, and their diverse adaptations make them a rich resource for studies of water balance, nutrition, reproduction and evolution. This book synthesizes the body of information from research on epiphytes and their relations with other tropical biota, and provides a comprehensive overview of basic functions, life history, evolution, and the place of epiphytes in complex tropical communities. Tropical ecologists and zoologists as well as plant scientists will find this volume a useful guide to research on the twenty-five thousand species of epiphytes which root in the crowns of tropical trees.

Bibliography on Indian Pteridology - Surjit Kaur 1983

The Kew Record of Taxonomic Literature Relating to Vascular Plants - 1978

An Introduction to Pteridophyta - A. Rashid 1979

Introduction to Botany - James Lee 2019

Perspectives in Environment - S.K. Agarwal 1998

The Kew Record of Taxonomic Literature - 1979

Climatic Oscillations and the Fragmentation of Plant Populations - Christoph Reisch 2002

Evolution Through Genetic Exchange - Michael L Arnold 2006-07-27

More and more data indicate that evolution has resulted in lineages consisting of mosaics of genes derived from different ancestors. It is therefore becoming increasingly clear that the tree is an inadequate metaphor of evolutionary change. In this book, Arnold promotes the 'web-of-life' metaphor as a more appropriate representation of evolutionary change in all lifeforms.

Indian Books in Print - 2003

Problems of Cytology and Evolution in the Pteridophyta - I. Manton 1982

Botany Illustrated - Janice Glimn-Lacy 2012-12-06

This is a discovery book about plants. It is for students In the first section, introduction to plants, there are sev of botany and botanical illustration and everyone inter eral sources for various types of drawings.

Hypotheti ested in plants. Here is an opportunity to browse and cal diagrams show cells, organelles, chromosomes, the choose subjects of personal inter. est, to see and learn plant body indicating tissue systems and experiments about plants as they are described. By adding color to with plants, and flower placentation and reproductive the drawings, plant structures become more apparent structures. For example, there is no average or stan and show how they function in life. The color code dard-looking flower; so to clearly show the parts of a clues tell how to color for definition and an illusion of flower (see 27), a diagram shows a stretched out and depth. For more information, the text explains the illus exaggerated version of a pink (Dianthus) flower (see trations. The size of the drawings in relation to the true 87). A basswood (Tifia) flower is the basis for diagrams size of the structures is indicated by X 1 (the same size) of flower types and ovary positions (see 28). Another to X 3000 (enlargement from true size) and X n/n source for drawings is the use of prepared microscope (reduction from true size). slides of actual plant tissues.

The pteridophyta, gymnospermae and moncotyledoneae - Henry Allan Gleason 1952

The Morphology of Pteridophytes - K. R. Sporne 1962

Biodiversity - John I. Spicer 2009-01-15

Discusses the many different life forms that have existed on Earth, their importance, and how they have changed over time.

Origin and evolution of diversity in plants and plant communities - Hiroshi Hara 1985

Books of India - 1976

Functional and Phylogenetic Ecology in R - Nathan G. Swenson 2014-03-26

Functional and Phylogenetic Ecology in R is designed to teach readers to use R for phylogenetic and functional trait analyses. Over the past decade, a dizzying array of tools and methods were generated to incorporate phylogenetic and functional information into traditional ecological analyses. Increasingly these tools are implemented in R, thus greatly expanding their impact. Researchers getting started in R can use this volume as a step-by-step entryway into phylogenetic and functional analyses for ecology in R. More advanced users will be able to use this volume as a quick reference to understand particular analyses. The volume begins with an introduction to the R environment and handling relevant data in R. Chapters then cover phylogenetic and functional metrics of biodiversity; null modeling and randomizations for phylogenetic and functional trait analyses; integrating phylogenetic and functional trait information; and interfacing the R environment with a popular C-based program. This book presents a unique approach through its focus on ecological analyses and not macroevolutionary analyses. The author provides his own code, so that the reader is guided through the computational steps to calculate the desired metrics. This guided approach simplifies the work of determining which package to use for any given analysis. Example datasets are shared to help readers practice, and readers can then quickly turn to their own datasets.

Spores of the Pteridophyta - Alice F. Tryon 2012-12-06

This book constitutes a unique, encyclopedic reference work that systematizes and categorizes for the first time in such comprehensive fashion all known fern spores. The dominant feature of the work are the over 350 plates of electron micrographs showing the morphological characteristics of typical representatives of each spore type. The purpose of the book is to provide a complete survey of the available data on the fine structure and composition, development, and evolu- tionary significance of different types of spore walls, which have proven resistant to fossilization throughout geological ages. The classification system developed by the authors as the result of many years of research will be a point of reference, if not "the" systematic basis, for all future publication on the subject. The book will be of great interest to all botanists and evolutionary biologists working with spores and/or ferns, but it will also be of major importance to paleobotanists, palynologists,

stratigraphers, and exploration geologists, since the focus of this treatise is on spores as highly adapted and longlived reproductive forms.

National Union Catalog - 1980

Includes entries for maps and atlases.

The Botanica - 1977

Botany for Degree Students: Fungi (Revised Multi-Colour Edition) - Vashishta B.R./ Sinha A.K. & Kumar Adarsh 2016

This comprehensive and well known textbook deals with the characteristics, classification and life cycle of different species of fungi. While it provides a detailed account of bacteria, viruses, mycoplasma and lichens, it also discusses elementary plant pathology.

Five Kingdoms - Lynn Margulis 1998

An all-inclusive catalogue of the world's living diversity, Five Kingdoms defines and describes the major divisions, or phyla, of nature's five great kingdoms - bacteria, protoctists, animals, fungi, and plants - using a modern classification scheme that is consistent with both the fossil record and molecular data. Generously illustrated and remarkably easy to follow, it not only allows readers to sample the full range of life forms inhabiting our planet but to familiarize themselves with the taxonomic theories by which all organisms' origins and distinctive characteristics are traced and classified.

Fern Ecology - Klaus Mehltreter 2010-06-03

Ferns are an integral part of the world's flora, appreciated for their beauty as ornamentals, problematic as invaders and endangered by human interference. They often dominate forest understories but also colonize open areas, invade waterways and survive in nutrient-poor wastelands and eroded pastures. Presented here is the first comprehensive summary of fern ecology, with worldwide examples from Siberia to the islands of Hawaii. Topics include a brief history of the ecological study of ferns, a global survey of fern biogeography, fern population dynamics, the role of ferns in ecosystem nutrient cycles, their adaptations to xeric environments and future directions in fern ecology. Fully illustrated concepts and processes provide a framework for future research and utilization of ferns for graduate students and professionals in ecology, conservation and land management.

Working with Ferns - Helena Fernández 2010-11-11

This well timed volume features a selection of chapters composed by experts in their respective fields. It covers a broad range of topics, from its fundamental biology to the fern’s population genetics and environmental and therapeutic applications.

Gymnosperms - S. P. Bhatnagar 1996

This text is an examination of gymnosperms. Topics include: progymnosperms and the origin of gymnosperms; pteridospermales; glossopteridales; caytoniales; cycadales; cycadeoidales; pertoxylales; ginkgoales; czekanowskiales; cordaitales; voltziales; coniferales.

The Kew Record of Taxonomic Literature Relating to Vascular Plants for ... - 1979

Pteridophytes and Gymnosperms - K.U. Kramer 1990-09-28

This encyclopedia offers access to the diversity of ferns and seed plants, the most important groups of green land plants. Available information of general and systematic relevance is synthesized at the level of families. Evidence from virtually all disciplines important to modern taxonomy makes the work a most valuable source of reference not only for taxonomists, but for all who are interested in the various aspects of plant diversity. A revised classification includes a complete inventory of genera along with their diagnostic features, keys for identification, and references to the literature. The first volume deals with pteridophytes and gymnosperms.

National Agricultural Library Catalog - National Agricultural Library (U.S.) 1977

The Journal of the Indian Botanical Society - Indian Botanical Society 1976

Plant Polyphenols - Richard W. Hemingway 2012-12-06

This book was developed from the proceedings of the 2nd North

American Tan nin Conference held in Houghton, Michigan, June, 1991. The objective of this con ference was to bring together people with a common interest in plant polyphenols and to promote interdisciplinary interactions that will lead to a bet ter understand ing of the importance of these substances. Another objective of this conference was to extend the 'tannin family' by making special efforts to encourage participation by scientists outside the United States, obtain more coverage of the hydrolyzable tannins, and further broaden the scope of coverage from the initial concentration on forestry and forest products. Com parison of the contents of this book with 'Chemistry and Significance of Condensed Tannins' that resulted from the proceedings of the 1st North American Tannin Conference shows the degree that these objectives were met. In developing the second conference, care was taken to assure that this book extends rather than duplicates the coverage of the first conference. Therefore, the two books should be taken together to obtain an up to date coverage of the broad area of chemistry and significance of plant polyphenols. Our thanks go to the authors who so kindly contributed chapters and so pa tiently responded to our requests. We thank the Conference Assistance Staff of Michigan Technological University for their help in planning and conducting the conference.

Plant Cell Vacuoles - Deepesh De 2000-03-01

This book is the only comprehensive work, at introductory level, on plant cell vacuoles. Vacuoles are ubiquitous, multifaceted and indispensable organelles and yet they have been thinly treated in the literature to date. This is at odds with the amount of interest in vacuoles that has been expressed in the last two decades. This comprehensive work provides a solid foundation on vacuoles to an advanced level. The latest research findings have been included in all aspects of plant and yeast vacuoles. The book synthesizes all the available information on the plant cell vacuole. It includes methodologies, occurrence and diversity, structure and biochemistry of tonoplasts and molecular biology of biogenesis and diverse functions, all presented in a concise way. The tremendous surge in the genetic engineering of plants for commercial products requires a comprehension of the functions and possibilities of vacuole manipulation since most of the targets of improvement directly involve vacuoles. Thus the work will be valuable to students of plant sciences, plant breeding, cell biology and plant biotechnology, as well as advanced researchers who seek a better understanding of this vital organelle.

Phytomorphology - 1976

Agrindex - 1992