Microspores Evolution And Ontogeny

Androgenesis and Haploid Plants
Microspores Evolution and Ontogeny
Palynotaxonomical Studies on Selected Indian Endemic Legumes
Early Palaeozoic Biogeography and Palaeogeography
The Embryology of Angiosperms, 6th Edition
The Timetree of Life
Embryology of Flowering Plants: Terminology and Concepts, Vol. 1
International Review of Cytology
Ontogeny and Systematics
Biology of Algae, Lichens and Bryophytes
Diversity and Evolutionary Biology of Tropical Flowers
Progress in Botany
Characterization of Microspore Separation During Pollen Development in Arabidopsis Thaliana
Plant Taxonomy
Molecular and Cellular Aspects of Plant Reproduction
Bryology for the Twenty-first Century
Biology of Pollen
Progress in Botany

Saffron
The Evolution of Plant Physiology
Handbook of Seed Science and Technology
Sexual Plant Reproduction
Homoplasy
Progress in Botany Vol. 82
Reproductive Biology of Angiosperms
The Anther
Plants Invade the Land
Evolutionary Biology
Bryophyte Biology
Advances in Botanical Research
Molecular Systematics of Plants II
Fertilization in Higher Plants
Evolution and Diversification of Land Plants
Pollen and Pollination
Ginkgo Biloba A Global Treasure
Genetic control of self-incompatibility and reproductive development in flowering plants
Transformative Paleobotany
The Tapetum
In vitro Haploid Production in Higher Plants
Atlas of Sexual Reproduction in Flowering Plants

COWAN CHAMBERS

Androgenesis and Haploid Plants CRC Press
A unique account of the structure, biology and evolution of tropical flowering plants.
Microspores Evolution and Ontogeny Elsevier
The anther tapetum,

present in all land plants, is a highly specialized, transient tissue surrounding the (micro-)spores and/or pollen grains during their development. Any tapetum malfunction causes male sterility. The exact knowledge of tapetum form and function therefore is indispensable not only for basic research, but also and especially in plant breeding and plant genetics. In fourteen contributions by reknown experts, a comprehensive account of the various characters and functions of the tapetum is provided, covering the areas of cytology, cytophysiology, biochemistry, tapetum development and function. **Palynotaxonomical Studies on Selected Indian Endemic Legumes** APH Publishing Providing a comprehensive and contemporary overview of the status of this particular genus, this book will be of interest to all those concerned with the study and uses of spices, medicinal and aromatic plants. **Early Palaeozoic Biogeography and Palaeogeography** OUP Oxford Bryophyte Biology provides an extensive overview of the hornworts, liverworts, and mosses; diverse groups of land plants that occupy a great variety

of habitats throughout the world. This edition covers essential aspects of bryophyte biology, from morphology, physiological ecology and conservation, to speciation, and genomics. Revised classifications incorporate contributions from recent phylogenetic studies. Six new chapters complement fully updated chapters from the original book to provide a completely up-to-date resource. New chapters focus on the contributions of Physcomitrella to plant genomic research, population ecology of bryophytes, mechanisms of drought tolerance, a phylogenomic perspective on land plant evolution, and problems and progress of bryophyte speciation and conservation. Written by leaders in the field, this book offers an authoritative treatment of bryophyte biology, with rich citation of the current literature, suitable for advanced students and researchers.

The Embryology of Angiosperms, 6th Edition

Cambridge University Press

Publisher Description

The Timetree of Life

Springer Science & Business Media

International Review of Cytology

Embryology of Flowering Plants: Terminology and Concepts, Vol. 1

Columbia University Press

A reference text with the latest information and research for educators, students, and researchers! World hunger and malnutrition remain an alarming concern that spurs researchers to develop quality technology. The Handbook of Seed Science and Technology is an extensive reference text for educators, students, practitioners, and researchers that focuses on the underlying mechanisms of seed biology and the impact of powerful biotechnological approaches on world hunger, malnutrition, and consumer preferences. This comprehensive guide provides the latest available research from noted experts pointing out the likely directions of future developments as it presents a wealth of seed biology and technological information. Seed science is the all-important foundation of plant science study. The Handbook of Seed Science and Technology provides an integrative perspective that takes you through the fundamentals to the latest applications of seed science and technology. This resource provides a complete overview, divided into four sections: Seed Developmental Biology and Biotechnology ; Seed

Dormancy and Germination; Seed Ecology; and Seed Technology. The Handbook of Seed Science and Technology examines: the molecular control of ovule development female gametophyte development cytokinins and seed development grain number determination in major grain crops metabolic engineering of carbohydrate supply in plant reproductive development enhancing the nutritive value of seeds by genetic engineering the process of accumulation of seed proteins and using biotechnology to improve crops synthetic seeds dormancy and germination hormonal interactions during dormancy release and germination photoregulation of seed germination seed size seed predation natural defense mechanisms in seeds seed protease inhibitors soil seed banks the ecophysiological basis of weed seed longevity in the soil seed quality testing seed vigor and its assessment diagnosis of seed-borne pathogens seed quality in vegetable crops vegetable hybrid seed production practical hydration of seeds of tropical crops seed technology in plant germplasm The Handbook of Seed Science and Technology is extensively

referenced and packed with tables and diagrams, and makes an essential source for students, educators, researchers, and practitioners in seed science and technology.

International Review of Cytology CRC Press

Molecular aspects of flower morphogenesis for researchers and students from SEB Seminar. The book will appeal to students and researchers in floral physiology.

Ontogeny and Systematics Springer Science & Business Media

What do we now know about the origins of plants on land, from an evolutionary and an environmental perspective? The essays in this collection present a synthesis of our present state of knowledge, integrating current information in paleobotany with physical, chemical, and geological data.

Biology of Algae, Lichens and Bryophytes Springer Science & Business Media

A modern approach to understanding the evolution and diversification of land plants, one of the most exciting areas of plant systematics. It consists of three sections - origin and diversification of primitive land plants; origin and diversification of angiosperms; speciation and

mechanisms of diversification - each section corresponding to a major area in plant evolution. In each case, data from molecular, morphological, and paleontological approaches are presented, backed by recent progress and new findings, together with proposals for future research. A guide to the latest in plant systematics, heightening awareness of prospective future problems.

Diversity and Evolutionary Biology of Tropical Flowers

Springer Science & Business Media

Plant reproductive biology has undergone a revolution during the past five years, with the cloning, sequencing and localization of the genes important in reproduction. These advantages in plant molecular biology have led to exciting applications in plant biotechnology, including the genetic engineering of male sterility and other reproductive processes. This book presents an interesting and contemporary account of these new developments from the scientists in whose laboratories they have been made. The chapters focus on two areas: the molecular biology of self-incompatibility, which is the system of self-recognition controlled by

the S-gene and related genes; and the cellular and molecular biology of pollen development and genetic dissection of male sterility. Some chapters feature Arabidopsis, with its unique genetic system. Reproduction is vital for seed production in crop plants, and this book presents new approaches to manipulate plant breeding systems for the 21st century.

Progress in Botany

Springer Nature

This book is designed to introduce the basics of different aspects of the biology of reproduction in a concise and coherent manner. The book aims to equip students with the fundamentals of the biology of reproduction and also update them with the most recent advances in the field of reproduction. The book has been organized into 16 chapters that introduce and explain different aspects in a stimulating manner. Each chapter is supplemented with a summary and relevant illustrations. A glossary has been added to help the students to understand some important scientific terms. The book offers comprehensive coverage of the important topics including: Flower structure and development Development

and structure of male and female gametophytes Pollination biology, fertilization and self-incompatibility Endosperm, embryo and polyembryony Apomixis and seed biology A separate topic on experimental plant reproductive biology (experimental embryology) has been provided, which includes basics of cell, tissue and organ culture, anther culture, pollen culture, flower, ovary, ovule culture, embryo culture, somatic embryogenesis, synthetic seeds, protoplast culture and other aspects of plant biotechnology. The book aims to cater to the needs of the advanced undergraduate and post-graduate students in Botany, Forestry, Agriculture and related fields.

Characterization of Microspore Separation During Pollen Development in Arabidopsis Thaliana Springer Science & Business Media

Transformative Paleobotany: Papers to Commemorate the Life and Legacy of Thomas N. Taylor features the broadest possible spectrum of topics analyzing the structure, function and evolution of fossil plants, microorganisms, and organismal interactions in fossil ecosystems (e.g., plant paleobiograph

y, paleoecology, early evolution of land plants, fossil fungi and microbial interactions with plants, systematics and phylogeny of major plant and fungal lineages, biostratigraphy, evolution of organismal interactions, ultrastructure, Antarctic paleobotany). The book includes the latest research from top scientists who have made transformative contributions. Sections are richly illustrated, well concepted, and characterize and summarize the most up-to-date understanding of this respective and important field of study. Features electronic supplements, such as photographs, diagrams, tables, flowcharts and links to other websites Includes in-depth illustrations with diagrams, flowcharts and photographic plates (many in color for enhanced utility), tables and graphs

Plant Taxonomy

Springer Science & Business Media

With one new volume each year, this series keeps scientists and advanced students informed of the latest developments and results in all areas of botany. The present volume includes reviews on structural botany, plant physiology, genetics, taxonomy, and

geobotany.

Molecular and Cellular Aspects of Plant Reproduction
Cambridge University Press
Jointly published with INRA, Paris.
The use of haploid plants is of increasing importance in plant biology and plant breeding. This book illustrates how the advances in plant molecular and cell biology provide an exciting means for the analysis of androgenesis in terms of pollen development and the initiation of embryogenesis. It provides both an appraisal of techniques and their practical application, and is the most up-to-date source of information about the biology of gametophytes.

Bryology for the Twenty-first Century
Columbia University Press
An understanding of the processes of plant reproduction is increasingly important in the exploitation of plant resources. Microspore formation is a major event in the life cycles of land plants, allowing the transition from diploid sporophyte generation to the haploid gametophyte generation, and varies greatly between taxa in the diversity of processes involved. Despite the wealth of information available, there are very few sources

which bring together the results of research work on the reproduction in all the major plant groups.**Micr ospores fills this gap by reviewing microsporoge nesis from a systematic and evolutionary perspective in groups ranging from algae to angiosperms. Special chapters focus on structure, function, cell and molecular processes, and potential biotechnologic al applications of plant spores and pollen. The result is an up-to-date guide to the applications of modern techniques in the classic area of botany.**This work bridges several disciplines to provide a coherent and authoritative account which will be essential reading for research scientists and lecturers in botany, evolution, ultrastructure, reproductive and developmenta l biology, and palynology.

Biology of Pollen

Springer Science & Business Media

Leguminosae is the third largest family of flowering plants after Asteraceae and Orchidaceae. In India, it is the second largest family after Orchidaceae with more than 1400 species out of which about 23% are strictly confined to the country. In India, the maximum legume diversity and endemism is

found in the Western Ghats biodiversity hotspot. Even though many reports on palynological data on widely distributed and alien species of Indian Leguminosae are available, only scanty data is available regarding the endemic legumes of India. This book presents the palynological details of 60 Indian endemic legumes so far unknown to science and their role in taxonomic considerations , which may help to improve our knowledge in these areas and to take right decisions whenever taxonomic problems are encountered related to these plants. Each taxon is provided with updated nomenclature, brief description of the plant including pollen morphology, details of habitat, phenology and distribution. Photographs, illustration and distribution map of each species is also provided.

Progress in Botany

Cambridge University Press

With one volume each year, this series keeps scientists and advanced students informed of the latest developments and results in all areas of the plant sciences. This latest volume includes reviews on plant physiology, biochemistry, genetics and genomics, forests, and ecosystems.

Saffron
Springer Nature
Since the beginning of agricultural production, there has been a continuous effort to grow more and better quality food to feed ever increasing popula tions. Both improved cultural practices and improved crop plants have allowed us to divert more human resources to non-agricultural activities while still increasing agricultural production. Malthusian population predictions continue to alarm agricultural researchers, especially plant breeders, to seek new technologies that will continue to allow us to produce more and better food by fewer people on less land. Both improvement of existing cultivars and development of new high-yielding cultivars are common goals for breeders of all crops. In vitro haploid production is among the new technologies that show great promise toward the goal of increasing crop yields by making similar germplasm available for many crops that was used to implement one of the greatest plant breeding success stories of this century, i. e. , the development of hybrid maize by crosses of inbred lines. One of the main applications of anther culture

has been to produce diploid homozygous pure lines in a single generation, thus saving many generations of backcrossing to reach homozygosity by traditional means or in crops where self-pollination is not possible. Because doubled haploids are equivalent to inbred lines, their value has been appreciated by plant breeders for decades. The search for natural haploids and methods to induce them has been ongoing since the beginning of the 20th century.

The Evolution of Plant Physiology

CRC Press

The field of plant taxonomy has transformed rapidly over the past fifteen years, especially with regard to improvements in cladistic analysis and the use of new molecular data. The second edition of this popular resource reflects these far-reaching and dramatic developments with more than 3,000 new references and many new figures. Synthesizing current research and trends, Plant Taxonomy now provides the most up-to-date overview in relation to monographic, biodiversity, and evolutionary studies, and continues to be an essential resource for students and scholars. This text is divided into two parts: Part 1

explains the principles of taxonomy, including the importance of systematics, characters, concepts of categories, and different approaches to biological classification. Part 2 outlines the different types of data used in plant taxonomic studies with suggestions on their efficacy and modes of presentation and evaluation. This section also lists the equipment and financial resources required for gathering each type of data. References throughout the book illuminate the historical development of taxonomic terminology and philosophy while citations offer further study. Plant Taxonomy is also a personal story of what it means to be a practicing taxonomist and to view these activities within a meaningful conceptual framework. Tod F. Stuessy recalls the progression of his own work and shares his belief that the most creative taxonomy is done by those who have a strong conceptual grasp of their own research.

Related with Microspores Evolution And Ontogeny:

• Anatomy Superficial And Deep : click here