Fern Allies Of Uttarakhand An Annotated Catalogue

#fern allies Uttarakhand #Uttarakhand flora guide #pteridophytes catalogue Himalaya #annotated plant list Uttarakhand #Himalayan fern species

This comprehensive annotated catalogue explores the diverse range of fern allies found within the Uttarakhand region, offering detailed descriptions, distribution data, and ecological insights. It serves as an essential reference for botanists, researchers, and enthusiasts interested in the unique pteridophyte flora of this specific Himalayan ecosystem.

Fern-allies of Uttarakhand

The state of Tripura is one of the richest and interesting Botanical regions in North East India, which is floristically incompletely known. The present work is the outcome of comprehensive survey and study of Pteridophytic plants by the author for a period of 10 years. The area covered in the present flora is 10,491 sq .km, lying between 22-32 and 24-32 N and 91-10 and 92-21 E The author have enumerated 76 species under 41 genera and 28 families according to Pichi Sermolli's system of classification. Correct description based on careful study of freshly collected plants, its currently accepted botanical name, synonyms, if any, brief ecological notes, and distribution are given for each species. Anatomical details of each species is a special attraction of this book, almost all the species have been illustrated. Artificial keys for identification of families, genera and species under each family are given. The introductory account includes all about the area of study, climate, soils, previous botanical exploration of the area, ecological observation etc of the ferns and fern-allies. On the whole this book serves as a guide to the identification of pteridophytic plants of the state of Tripura, North-east India.

Pteridophytic Flora of North Eastern India

Contributed articles based on environmental and socioecological studies in India.

Ferns and Fern-allies of Tripura

The Himalaya, a global biodiversity hotspot, sustains about one-fifth of the humankind. Nestled within the north-western mountain ranges of the Himalaya, the Jammu and Kashmir (J&K) State harbours more than half of the biodiversity found in the Indian Himalaya. The wide expanse of State, spread across the subtropical Jammu, through the temperate Kashmir valley, to the cold arid Ladakh, is typical representative of the extensive elevational and topographical diversity encountered in the

entire Himalaya. This book, the most comprehensive and updated synthesis ever made available on biodiversity of the J&K State, is a valuable addition to the biodiversity literature with global and regional relevance. The book, arranged into 7 parts, comprises of 42 chapters contributed by 87 researchers, each of whom is an expert in his/her own field of research. The precious baseline data contained in the book would form the foundation for assessing current status of knowledge about the bioresources, identify the knowledge gaps, and help prioritization of conservation strategies to steer the sustainable use of biodiversity in this Himalayan region. Given the breadth of topics covered under the banner of biodiversity in this book, it can surely serve as a model for documentation of biodiversity in other regions of the world. The book will be of immense value to all those who, directly or indirectly, have to deal with biodiversity, including students, teachers, researchers, naturalists, environmentalists, resource managers, planners, government agencies, NGOs and the general public at large.

Ferns and Fern-allies of Nepal

Poplars and willows form an important component of forestry and agricultural systems, providing a wide range of wood and non-wood products. This book synthesizes research on poplars and willows, providing a practical worldwide overview and guide to their basic characteristics, cultivation and use, issues, problems and trends. Prominence is given to environmental benefits and the importance of poplar and willow cultivation in meeting the needs of people and communities, sustainable livelihoods, land use and development.

Ferns and Fern-allies of Nepal

"This is the second issue in the Global Re-introduction Perspectives series and has been produced in the same standardized format as the previous one. The case-studies are arranged in the following order: Introduction, Goals, Success Indicators, Project Summary, Major Difficulties Faced, Major Lessons Learned, Success of Project with reasons for success or failure. For this second issue we received a total of 72 case-studies compared to 62 in the last issue. These case studies cover the following taxa as follows: invertebrates (9), fish (6), amphibians (5), reptiles (7), birds (13), mammals (20) and plants (12) ... We hope the information presented in this book will provide a broad global perspective on challenges facing re-introduction projects trying to restore biodiversity"--Pritpal S. Soorae.

Ferns And Fern-Allies Of Arunachal Pradesh: 2 Vols. Set

The book brings together research topics having a broad focus on human and climate change impacts on the terrestrial ecosystems in the tropics in general and more specifically from the most significant and vulnerable Himalayan ecosystem. A total of 16 contributions included in the book cover a diverse range of global change themes such as the impacts of changing temperature and precipitation on soil ecosystems, forest degradation, extent and impacts of invasive species, plant responses to pollution, climate change impacts on biodiversity and tree phenology, environmental changes associated with land use, importance of traditional knowledge in climate change adaptation, timberline ecosystems, and role of integrated landscape modeling for sustainable management of natural resources. The book is a collective endeavour of an international multidisciplinary group of scientists focused on improving our understanding of the impacts of global change on the structure and functioning of tropical ecosystems and addressing the challenges of their future sustainable management. We hope that the book will help researchers working in the areas of ecology and environmental science to update their knowledge. We also expect that natural resource managers and policy planners will find explanations for some of their observations and hypotheses on multiple global change factors impacting tropical ecosystems and especially Himalayan ecosystems.

Ferns and fern allies of Sikkim : a pictorial handbook

At a time when interest in herbs and natural medicine has never been higher, the second edition of this essential guide shows how to identify more than 500 healing plants. 300+ color photos.

Frontiers in Environmental Geography

Textbook of Pharmacognosy and Phytochemistry This comprehensive textbook is primarily aimed at the course requirements of the B. Pharm. students. This book is specially designed to impart knowledge alternative systems of medicine as well as modern pharmacognosy. It would also serve as a valuable resource of information to other allied botanical and alternative healthcare science students as well as

researchers and industrialists working in the field of herbal technology. Only Textbook Offering... Recent data on trade of Indian medicinal plants (till 2008) Illustrated biosynthetic pathways of metabolites as well as extraction and isolation methodologies of medicinal compounds Bioactivity determination and synthesis of herbal products of human interest Information on Ayurvedic plants and Chinese system of medicine Simple narrative text that will help the students quickly understand important concepts Over 300 illustrations and 120 tables in order to help students memorize and recall vital concepts making this book a student’s companion cum teacher A must buy for every student of pharmacognosy!

Biodiversity of the Himalaya: Jammu and Kashmir State

Plantation forests often have a negative image. They are typically assumed to be poor substitutes for natural forests, particularly in terms of biodiversity conservation, carbon storage, provision of clean drinking water and other non-timber goods and services. Often they are monocultures that do not appear to invite people for recreation and other direct uses. Yet as this book clearly shows, they can play a vital role in the provision of ecosystem services, when compared to agriculture and other forms of land use or when natural forests have been degraded. This is the first book to examine explicitly the non-timber goods and services provided by plantation forests, including soil, water and biodiversity conservation, as well as carbon sequestration and the provision of local livelihoods. The authors show that, if we require a higher provision of ecosystem goods and services from both temperate and tropical plantations, new approaches to their management are required. These include policies, methods for valuing the services, the practices of small landholders, landscape approaches to optimise delivery of goods and services, and technical issues about how to achieve suitable solutions at the scale of forest stands. While providing original theoretical insights, the book also gives guidance for plantation managers, policy-makers, conservation practitioners and community advocates, who seek to promote or strengthen the multiple-use of forest plantations for improved benefits for society. Published with CIFOR

Flora of Chamoli

This is an illustrated book that points out wildlife crimes conducted in India -- it shows how poachers work, their mechanisms and how officials can control and curb wildlife crime -- which accounts for a shockingly large percentage of illegal trade and crime in the world.

Handbook to the Ferns of British India, Ceylon and the Malay Peninsula

This book is a printed edition of the Special Issue "Enhancing Soil Health to Mitigate Soil Degradation" that was published in Sustainability

Poplars and Willows

Fresh waters are disproportionately rich in species, and represent global hotspots of biodiversity. However, they are also hotspots of endangerment.

Global Re-introduction Perspectives

This book presents the results of the biodiversity hotspots - those discrete, biogeographic regions that are known to hold at least 1,500 plants as endemics and that have lost at least 70% of their primary native vegetation.

Tropical Ecosystems: Structure, Functions and Challenges in the Face of Global Change

POLLUTANTS AND WATER MANAGEMENT Pollutants and Water Management: Resources, Strategies and Scarcity delivers a balanced and comprehensive look at recent trends in the management of polluted water resources. Covering the latest -practical and theoretical aspects of polluted water management, the distinguished academics and authors emphasize indigenous practices of water resource management, the scarcity of clean water, and the future of the water system in the context of an increasing urbanization and globalization. The book details the management of contaminated water sites, including heavy metal contaminations in surface and subsurface water sources. It details a variety of industrial activities that typically pollute water, such as those involving crude oils and dyes. In its discussion of recent trends in abatement strategies, Pollutants and Water Management includes an exploration of the application of microorganisms, like bacteria, actinomycetes, fungi, and cyanobacteria, for the management of environmental contaminants. Readers will also discover a wide

variety of other topics on the conservation of water sources including: The role of government and the public in the management of water resource pollution The causes of river system pollution and potential future scenarios in the abatement of river pollution Microbial degradation of organic pollutants in various water bodies The advancement in membrane technology used in water treatment processes Lead contamination in groundwater and recent trends in abatement strategies for it Highly polluting industries and their effects on surrounding water resources Perfect for graduate and postgraduate students and researchers whose focus is on recent trends in abatement strategies for pollutants and the application of microorganisms for the management of environmental contaminants, Pollutants and Water Management: Resources, Strategies and Scarcity also has a place in the libraries of environmentalists whose work involves the management and conservation of polluted sites

A Field Guide to Medicinal Plants and Herbs of Eastern and Central North America

In his delightful The Valley of Flowers, mountaineer Frank Smythe takes you on a botanical expedition to the Garhwal Himalaya. Alongside the author, scale the steep craggy mountains and bathe in crystal clear pools; breathe in the scented foothills of the Himalaya and their carpets of peonies, roses, rhododendrons and gentian. Experience 'the keen, biting air of the heights and the soft, scented air of the valleys'. Climber and adventurer Smythe journeys through the Himalaya's Byundar Pass, climbs the Mana Peak, descends into the Byundar Valley, and comes terrifyingly close to an encounter with The Abominable Snowman. The Valley of Flowers is a pleasurable escape for any climber, walker, mountain lover or gardener, or indeed anyone who needs reminding of the beauty and serenity of the natural world.

Textbook of Pharmacognosy and Phytochemistry - E-Book

Confined to Pulwama Tehsil.

Ecosystem Goods and Services from Plantation Forests

The present book has been designed to bind prime knowledge of climate change-induced impacts on various aspects of our environment and its biological diversity. The book also contains updated information, methods and tools for the monitoring and conservation of impacted biological diversity.

Handbook on Wildlife Law Enforcement in India

This book envisages a multi-proxy approach using stable isotopes, geochemical proxies, magnetic susceptibility and associated biotic events for paleoclimatic and paleoenvironmental interpretations of the Mesozoic sedimentary record of India. Mesozoic rocks of India record abnormal sea level rise, greenhouse climate, intensified volcanism, hypoxia in seawater, extensive black shale deposition, and hydrocarbon occurrence. The Mesozoic has also witnessed mass extinction events, evolution of dinosaurs, and breakdown of the supercontinent Pangea and the formation of Gondwana. Although the Mesozoic geology of India has witnessed significant progress in the last century, literature survey reveals a huge gap in knowledge regarding sequence stratigraphy, chemostratigraphy and key geological events. A synthesis of sedimentological, paleontological and chemical data is included to presenting a comprehensive understanding of the Indian Mesozoic record to students, researchers and professionals.

Enhancing Soil Health to Mitigate Soil Degradation

Mountain food security and nutrition are core issues that can contribute positively to the achievement of the Sustainable Development Goals but paradoxically are often ignored in Zero Hunger and poverty reduction-related agenda. Under the overall leadership of José Graziano da Silva, the Former Director-General of FAO, sustainable mountain agriculture development is set as a priority in Asia and the Pacific, to effectively address this issue and assist Member Countries in tackling food insecurity and malnutrition in mountain regions. This comprehensive publication is the first of its kind that focuses on the multidimensional status, challenges, opportunities and solutions of sustainable mountain agriculture development for Zero Hunger in Asia. This publication is building on the ‘International Workshop and Regional Expert Consultation on Mountain Agriculture Development and Food Security and Nutrition Governance’, held by FAO RAP and UIR in November 2018 Beijing, in collaboration with partners from national governments, national agriculture institutes, universities, international organizations and international research institutes. The publication provides analysis with evidence on

how mountain agriculture could contribute to satisfying all four dimensions of food security, to transform food systems to be nutrition-sensitive, climate-resilient, economically-viable and locally adaptable. From this food system perspective, the priority should be given to focus on specialty mountain product identification (e.g. Future Smart Food), production, processing, marketing and consumption, which would effectively expose the potential of mountain agriculture to contribute to Zero Hunger and poverty reduction. In addition, eight Asian country case studies not only identify context-specific challenges within biophysical-technical, policy, socio-economic and institutional dimensions.

Freshwater Biodiversity

This book is a collection of best selected high-quality research papers presented at the International Conference on Advances in Energy Management (ICAEM 2019) organized by the Department of Electrical Engineering, Jodhpur Institute of Engineering & Technology (JIET), Jodhpur, India, during 20–21 December 2019. The book discusses intelligent energy management technologies which are cost effective compared to the high cost of fossil fuels. This book also explains why these systems have beneficial impact on environmental, economic and political issues of the world. The book is immensely useful for research scholars, academicians, R&D institutions, practicing engineers and managers from industry.

Hotspots Revisited

Between 2013 and 2015, the Food and Agriculture Organization of the United Nations (FAO) and the French National Institute for Agricultural Research (INRA) undertook a survey of innovative approaches that enable markets to act as incentives in the transition towards sustainable agriculture in developing countries. Through a competitive selection process, 15 cases from around the world provide insights into how small-scale initiatives that use sustainable production practices are supported by market demand, and create innovations in the institutions that govern sustainable practices and market exchanges. These cases respond to both local and distant consumers' concerns about the quality of the food that they eat. The book evidences that the initiatives rely upon social values (e.g. trustworthiness, health [nutrition and food safety], food sovereignty, promotion of youth and rural development, farmer and community livelihoods) to adapt sustainable practices to local contexts, while creating new market outlets for food products. Specifically, private sector and civil society actors are leading partnerships with the public sector to build market infrastructure, integrate sustainable agriculture into private and public education and extension programmes, and ensure the exchange of transparent information about market opportunities. The results are: (i) system innovations that allow new rules for marketing and assuring the sustainable qualities of products; (ii) new forms of organization that permit actors to play multiple roles in the food system (e.g. farmer and auditor, farmer and researcher, consumer and auditor, consumer and intermediary); (iii) new forms of market exchange, such as box schemes, university kiosks, public procurement or systems of seed exchanges; and (iv) new technologies for sustainable agriculture (e.g. effective micro-organisms, biopesticides and soil analysis techniques). The public sector plays a key role in providing legitimate political and physical spaces for multiple actors to jointly create and share sustainable agricultural knowledge, practices and products.

Pollutants and Water Management

The book "Advances in Biotechnology" is about recent advances in some of the important fields that are ongoing in certain biotechnological applications. Biotechnology has been quite helpful in keeping pace with the demands of every increasing human population and in improving the quality of human life. Major biotechnological achievements associated with human welfare have been from the fields like genetic engineering; transgenic plants and animals; genomics, proteomics, monoclonal antibodies for the diagnosis of disease, gene therapy etc. Fourteen authoritative chapters written by experts having experience in academics and research on current developments and future trends in biotechnology have been empathized. The book provides a detailed account of various methodologies used in biotechnology i.e. High capacity vectors, DNA sequencing dealing with next generation sequencing, Molecular markers, DNA microarray technology, as well as Proteomics that have revolutionized biotechnology with a wide array of applications. The book not only presents a well-founded explanation of the topics but also aims to present up-to-date reviews of current research efforts, some thoughtful discussions on the potential benefits and risks involved in producing biotechnological products and the challenges of bringing such products to market. It will prove to be an excellent reference work for both academicians and researchers, indicating new starting points to young researchers for new projects

in the field. The book is intended for biotechnologist, biologist, researchers, teachers and students of Biosciences and Biotechnology.

The Valley of Flowers

The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) is a pivotal piece of recent legislation, providing a route map for the use of such resources for sustainable agriculture and food security. Plant Genetic Resources and Food Security explains clearly the different interests and views at stake between all players in the global food chain. It touches upon many issues such as international food governance and policy, economic aspects of food and seed trade, conservation and sustainable use of food and agricultural biodiversity, hunger alleviation, ecological concerns, consumers' protection, fairness and equity between nations and generations, plant breeding techniques and socio-economic benefits related to food local economies. The book shows that despite the conflicting interests at stake, players managed to come to an agreement on food and agriculture for the sake of food security and hunger alleviation in the world. Published with the Food and Agriculture Organization (FAO) of the United Nations and with Bioversity International.

Flora of Pulwama (Kashmir)

The book provides reader with a comprehensive up-to-date overview of various aspects of soil pollutants manifestation of toxicity. The book highlights their interactions with soil constituents, their toxicity to agro-ecosystem & human health, methodologies of toxicity assessment along with remediation technologies for the polluted land by citing case studies. It gives special emphasis on scenario of soil pollution threats in developing countries and ways to counteract these in low cost ways which have so far been ignored. It also explicitly highlights the need for soil protection policy and identifies its key considerations after analyzing basic functions of soil and the types of threats perceived. This book will be a useful resource for graduate students and researchers in the field of environmental and agricultural sciences, as well as for personnel involved in environmental impact assessment and policy making.

The status and distribution of freshwater biodiversity in Indo-Burma

Freshwater is a finite resource and is being deteriorated directly and indirectly by anthropogenic pressures. Preserving the quality and availability of freshwater resources is becoming one of the most pressing environmental challenges on the international horizon. To ensure the preservation as well as availability of freshwater resources, there is a need to understand the ecology of the freshwater systems, pollution problems, their impacts, restoration techniques to be opted and the conservation measures. In this backdrop the present book on ‘Freshwater Pollution Dynamics and Remediation’ has been compiled. The book provides an understanding about the present state of art, pollution impacts including the changes in the environmental quality as well as the shift in the aquatic biological communities of the fragile freshwater ecosystems. Besides, the impact of deteriorating quality of the freshwater ecosystems on the animal and human health is also discussed in detail. This book provides a comprehensive account of the techniques based on updated research in biotechnology, bio-remediation, phyto-remediation and nano-bioremediation. The role of biosorpers and biofilms as a remediation tool has also been detailed. The book is a ready reference for researchers, scientists and educators who are involved in the freshwater pollution, remediation and management studies. The book editors with an expertise in diverse research fields in freshwater ecosystems have congregated the most inclusive research accounts on the freshwater pollution and remediation and thus developed a repository of diverse knowledge on the subject

Biological Diversity: Current Status and Conservation Policies

Adding a new introduction and two previously unpublished papers, Discourse and Practice: New Tools for Critical Discourse Analysis brings together van Leeuwen's methodological work on discourse analysis of the last 15 years. Discourse, van Leeuwen argues, is a resource for representation, a knowledge about some aspect of reality which can be drawn upon when that aspect of reality has to be represented, a framework for making sense of things. And they are plural. There can be different discourses, different ways of making sense of the same aspect of reality that serve different interests and will therefore be used in different social contexts. However abstract some discourses are, discourses ultimately always represent doings, van Leeuwen argues. Doing is the foundation of knowing, and social practices are the foundation of discourses. Studying children's books, newspaper reports, brochures and other texts, as well as photographs and children's toys, van Leeuwen investigates what can happen when practices

are transformed into discourses and provides analytical tools for reconstructing discourses from texts. Throughout the book, van Leeuwen makes connections between sociological and linguistic or semiotic concepts and methods to ensure the social and critical relevance of his analytical categories. van Leeuwen's work has already been widely used by critical discourse analysts across the world. This volume will be a welcome guide for anyone looking for a form of discourse analysis that is both explicit and methodical, and critically incisive.

Mesozoic Stratigraphy of India

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.

Mountain agriculture: Opportunities for harnessing Zero Hunger in Asia

Medicinal plants are globally valuable sources of herbal products. Plant-based remedies have been used for centuries and have had no alternative in the western medicine repertoire, while others and their bioactive derivatives are in high demand and have been the central focus of biomedical research. As Medicinal plants move from fringe to mainstream with a greater number of individuals seeking treatments free of side effects, considerable attention has been paid to utilize plant-based products for the prevention and cure of human diseases. An unintended consequence of this increased demand, however, is that the existence of many medicinal plants is now threatened, due to their small population size, narrow distribution area, habitat specificity, and destructive mode of harvesting. In addition, climate change, habitat loss and genetic drift have further endangered these unique species. Although extensive research has been carried out on medicinal and aromatic plants, there is relatively little information available on their global distribution patterns, conservation and the associated laws prevailing. This book reviews the current status of threatened medicinal plants in light of increased surge in the demand for herbal medicine. It brings together chapters on both wild (non-cultivated) and domestic (cultivated) species having therapeutic values. Thematically, conventional and contemporary approaches to conservation of such threatened medicinal plants with commercial feasibility are presented. The topics of interest include, but not limited to, biotechnology, sustainable development, in situ and ex situ conservation, and even the relevance of IPR on threatened medicinal plants. We believe this book is useful to horticulturists, botanists, policy makers, conservationists, NGOs and researchers in the academia and the industry sectors.

Intelligent Energy Management Technologies

This book recognizes and celebrates the contributions of Professor Ashok Sahni to the field of paleontology. Prof. Sahni established a School of Vertebrate Palaeontology at Panjab University, Chandigarh, India, where he trained many of today’s vertebrate paleontologists of India. The book covers topics on evolutionary patterns, macroevolutionary events, origination and radiation events, changes in physical environments & climate and their implications for biodiversity dynamics, intercontinental affinities and biogeographic connections in a plate tectonic framework. The book begins by exploring India in the age of the dinosaurs, discussing new fossil remains from the Jurassic Era, then moves through the Cretaceous and Eocene to provide a picture on faunal and floral changes in Gondwanaland in the context of plate tectonics. Furthermore, the book explores the evolutionary patterns and biotic dispersals that resulted from the northward drift of Indian plate during the Cretaceous and its collision with Asia in the Eocene. The respective chapters reveal the role of plate tectonics and climate in shaping the geographical distribution of plants and animals in Gondwana, specifically in India, as well as the post-India/Asia collision implications for biodiversity changes and biogeography in the region’s continental environments. Given its scope, the book will appeal to vertebrate paleontologists, evolutionary biologists, and paleobiogeographers.

Innovative markets for sustainable agriculture

This publication provides an overview of the common and unique sustainability elements of Indigenous Peoples' food systems, in terms of natural resource management, access to the market, diet diversity, indigenous peoples' governance systems, and links to traditional knowledge and indigenous languages. While enhancing the learning on Indigenous Peoples food systems, it will raise awareness on the need to enhance the protection of Indigenous Peoples' food systems as a source of livelihood for the 476 million indigenous inhabitants in the world, while contributing to the Zero Hunger Goal. In addition, the UN Decade of Action on Nutrition (2016-2025) and the UN Food Systems Summit call on the enhancement of sustainable food systems and on the importance of diversifying diets with nutritious foods, while broadening the existing food base and preserving biodiversity. This is a feature characteristic of Indigenous Peoples' food systems since hundreds of years, which can provide answers to the current debate on sustainable food systems and resilience.

Advances in Biotechnology

Plant Genetic Resources and Food Security