

Bryophyte Flora Of Gujarat India

A biographical record of contemporary achievement together with a key to the location of the original biographical notes.

This reference provides information about recent trends in bryology in parts of India, tropical rainforests and arctic regions. Bryophytes are the earliest land plants and quite fascinating in their overall diversity. All through its history, bryological study has contributed considerably to the field of plant sciences, for instance, the discovery of sex chromosomes in plants. The study of bryophytes is fundamental to our understanding of land plant evolution, and the latest progress in molecular phylogenetics and genomics have given researchers a clear depiction of land colonization of plants and subsequent terrestrial progression. Ecologically, the importance of bryophytes for the participation in biogeochemical cycles, in particular carbon cycle is now appreciated. Further, there has been an escalating interest in the conservation biology of bryophytes. The contributors have put forward holistic information regarding current research scenario of bryology in a range of environments to readers learning about research in applied bryology. The compilation of reviews presents reported findings related to various aspects of the subject, such as, conservation, diversity, tissue culture, bio-monitoring, computational bryology, molecular bryology, and species. Botanists and bryologists will receive updated information that will be valuable for their research work. The reader-friendly text is also suitable for beginners in applied plant science. Recent Advances in Botanical Science provides updated research and reviews on topics related to plant biology, genetics, taxonomy and ecology. The series is a useful resource for readers interested in applied plant science.

The book presents a consolidated account of diverse research aspects of Indian Bryophytes presented during National Conference on Bryology held from 14-16 December, 1995 at National Botanical Research Institute Lucknow and includes invited lecturers and contributory research papers. The book mainly highlights the diversity of Bryophytes in India ; floristic account of liverworts and mosses of Pachmarhi (M.P.), Mt. Abu and Andaman Islands; SEM studies on the spores of Indian ;liverworth and mosses; biomonitoring of heavy metals by Bryophytes; recent advances in the chemistry of Indian liverworts and their antimicrobial properties.

This study presents authentic data compiled from field experiments and investigations, and provides a point of reference for any future changes associated with anthropogenic activity in semiarid ecosystems. Three years of continuous and rigorous empirical research on biodiversity (from phytoplankton to higher plants and from zooplankton to higher animals – all flora and fauna) in India's semiarid region have culminated in this work. Though there are many studies available on issues related to biodiversity, the majority cover either specific groups of plants or groups of animals; with the exception of this book, studies that include all flora and fauna including the phyto- and zooplanktons in a given ecosystem are not readily available. Further, the book focuses on an extremely important topic, firstly because semiarid landscapes are highly vulnerable to climate change, and secondly because other developmental activities will be undertaken in the region in an effort to meet its energy requirements. As such, the results of the current study will provide a standard protocol for subsequent monitoring and mapping of biodiversity for conservation and management. The book explores, quantifies and surveys plant and animal species from aquatic and terrestrial ecosystems, assessing and quantitatively analyzing the diversity indices of different vegetation strata. Further, it investigates the conservation status of each species (flora and fauna) in keeping with IUCN categories. The study also examines landscape dynamics using RS and GIS for vegetation analysis, and discusses traditional ecological knowledge related to the use, conservation and management of biodiversity. As such, it offers a unique and valuable resource not only for researchers from the environmental/ecological sciences but also for conservationists and policymakers.

The book Floristic diversity of Barda Hills and its surroundings is first of its kind emphasizing the contribution of J.I. Thaker (1910) to the field of plant taxonomy and ethnobotany of Gujarat. His major contribution was on Vanaspati Sastra - Barda dungar ni-Jadibuti taeni Pariksha anae Upayog in Gujarati (1910). After his premiere work, no comprehensive study were undertaken to identify the multifarious changes that have come about in the area. In view of this, an attempt was made to understand the floristic diversity with different facets of taxonomic and ecological understanding in the Barda Hills and its surroundings. The basis of the whole study was based on the hypothesis that - the habitat destruction, over-exploitation of biotic resources, pollution and introduc-tion of exotic species as a result of human activities in the area over a period of ten decades, might have caused decline or shift in the species composition in the Barda Hills and its surroundings. Justification to the hypothesis includes various descriptive findings on biodiversity, historical understanding, floristic diversity, biogeography, species diversity (ecological prospective), genetic diversity and bioresources.

Bryophytes are of great importance in their ecosystems and for human well-being. They stabilize soil crust through colonization of bare grounds and rocks; they are essential in nutrient recycling, biomass production, and carbon fixing; they control water through an effective retention mechanism; and they have economic value as peat for fuel, horticulture, oil absorption, and as sources of a wide variety of chemical compounds. Bryophytes have long been used for medicinal purposes and provide a food source for reindeer, geese, ducks, sheep, musk-ox, lemmings, and other rodents. Threats include deforestation, cultivation of forests, reclamation of land, urbanization, roads, dam-building, mining, drainage of wetlands and over-grazing. This plan reviews the situation worldwide and proposes a variety of initiatives. It is aimed at those who work with and care about nature conservation, including governmental and non-governmental organizations as well as politicians and the general interested public. Combines the species and habitat approaches to plants and vegetation. This book features 700 plant species that are selected as those which are common, conspicuous or useful ecological indicators; species which collectively make up most of the vegetation in Britain and Ireland.

The Pathanamthitta District consists of three natural divisions viz, the lowlands, midlands and highlands. The topography of the district is highly undulating with hills and valleys. The vegetation is divided into 3 categories such as lowland vegetation, midland vegetation and upland vegetation. The Flora presents a systematic account of a total of 1249 species belonging to 658 general of 148 families of seed plants. The species index is registered as 460/1000 sq km which is comparatively very high and indicates the richness of the floristic diversity of the district. Seven new species and two new varieties have been discovered from the district. An analysis of the flora showed that 260 species are endemic which formed 22% of the total species. About 200 species are rare and 175 are severely threatened; most of which are local endemics. A total of 90 wild relatives of cultivated crop plants have been collected. Each species is provided with detailed up-to-date nomenclatural citations including synonyms if any, descriptions, phenology, distribution and notes on ecology, nomenclature, uses etc, if any. Illustrations of good quality of 59 species are also provided. The comprehensive floristic account will be of immense use to the botanists, agriculturists, foresters, pharmacists, phytochemists, nature conservationists, ethnobotanists and to all the scientists working in other allied disciplines. Contents Chapter 1: Introduction; Chapter 2: Area of Study; Chapter 3: Vegetation; Chapter 4: Review of Earlier Work; Chapter 5: Present Work; Chapter 6: Floristic Analysis; Chapter 7: Threats of the Flora; Chapter 8: Proposed Area for Conservation; Chapter 9: Systematic Treatment.

The book "Floristic Study of Arid Ecosystem: Ecology and Phytosociology" focuses on biodiversity, ecology and taxonomy of plant diversity of altitudinal hill gradient environment viz. Kachchh Arid

Ecosystem, Western Gujarat, India, with special emphasis on conservation and management of rare, endangered and threatened (RET) taxa. It encompasses the in-depth information on occurrence and distribution of general vegetation, species richness, frequency, density, abundance, commonness and rarity of important and significant plant species exist in the region. The core theme of this book is floristic study and altitudinal diversity of hilly plants with special reference to species distribution, population dynamics and community structure in addition to ethnobotany, ethnomedicine and phytosociology. The book embodies the vast and enormous information about ethnobotanical and ethnomedicinal plants used by tribal community of hilly habitats of Kachchh. This book also highlights the phytosociological aspects of invasive plant species viz. *Prosopis juliflora*, along with historical account, population structure, dominance and dynamics. It summarizes the unique records of RET plants in relation to status, distribution, age structure, threats faced, etc. Besides, the book is a good repository of field records of some native and endemic plants used by locales as medications or panacea for curing incorrigible ailments. The special feature of this book is conservation and management strategies of RET plants using grass-root techniques for survival, sustenance, revival, restoration and rejuvenation of dwindling plant species of environmental, ecological and economic importance of arid hill ecosystem.

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.

(Includes bibliography of publications by the staff)

Encyclopaedia Botanica Contains Information And Thought-Provoking Review Articles On Basic Branches Of Botany, Namely, Algae, Bryophytes, Pteridophytes, Gymnosperms, Anatomy, Palaeobotany And Cytology. In Addition, Topics Like Biotechnology, Geobotany, Ethnobotany, Aeropalynology, Ornamental Trees, Forest Plants And Biodiversity Have Been Included To Project Their Importance In The Twenty-First Century

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.

Document from the year 2015 in the subject Biology - Botany, , course: Research, language: English, abstract: The present compilation of moss flora of India revealed the occurrence of total 1578 species of mosses which belong to 21 orders, under 66 families and 328 genera. Out of these 897 retained their valid status, while 437 species are now considered as synonym and status of 244 species is still unresolved i.e. doubtful name. 130 taxa have been reported as endemic to India.

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