

## Ethnobotany Lecture 25 A Shipunov

*The genus Rhodiola (Family Crassulaceae) is indigenous to Northern Canada, Europe and Asia where its rhizomes and roots have been used for centuries for medicinal purposes. Recent interest in the species Rhodiola rosea (roseroot) in the West arose from the use of the rhizome as an adaptogen for the treatment of stress, but in the last few years, chemical and pharmacological studies have confirmed other valuable medicinal properties. Written by well-known researchers in this field of study, Rhodiola rosea examines important aspects of this increasingly important medicinal plant, including: Cultivation Taxonomy Ethnobotany Conservation Phytopathology Phytochemistry Pharmacology Biotechnology The book discusses in vitro culture of R. rosea and examines pests and diseases affecting the plant in Europe, Canada, and Alaska. It also examines pharmacological bioassays and toxicology. The contributors provide a meta-analysis of clinical trials and describe experimentation with R. rosea in clinical practice. They explore its use in a range of areas, including: Endocrine and immunity disorders, to improve sexual and immune functions, to augment cancer treatment, and in aerospace medicine for afflictions such as mountain sickness and jet lag. The final chapter uses a model to illustrate the cultivation of R. rosea as an industrial crop from field to medicine to cabinet. Synthesizing the most important literature in recent years, the book supplies a comprehensive peer-reviewed survey of the wide spectrum of possibilities for its use as a modern phytomedicinal agent. During the last nine millennia or so, man has improved the rice plant, increased its productivity and has found various uses of its parts. The story of rice differs from region to region and has been different in different periods of time. There was a time when tax was collected in the form of rice in Japan, the Southeast Asian Kingdoms created hyd*

*This introduction to morphometrics does not rely on complex mathematics and statistics. It includes application case studies in fields ranging from paleontology to evolutionary ecology, and it discusses software for analyzing and comparing shape.*

*What is NTSYS-pc? Modes of operation. Command line options. Configuration window and file. Preparation of input data files. Description of general programs. Description of similarity and dissimilarity programs. Description of clustering programs. Description of ordination programs. Graphics programs. Typical applications. Installation. Graphics.*

*Coevolution and Conservation in the Tropics*

*Ethnoveterinary Research & Development*

*Academia to Biotechnology*

*Ethnobotany*

*Current Concepts in Plant Taxonomy*

*Numerical Taxonomy and Multivariate Analysis System*

*Computational Botany*

*The country's leading authority on use of artifactual evidence in historical research collects twenty-five classic essays and gives his overview of the field of material culture.*

*The study of European wild food plants and herbal medicines is an old discipline that has been invigorated by a new generation of researchers pursuing ethnobotanical studies in fresh contexts. Modern botanical and medical science itself was built on studies of Medieval Europeans' use of food plants and medicinal herbs. In spite of monumental changes introduced in the Age of Discovery and Mercantile Capitalism, some communities, often of immigrants in foreign lands, continue to hold on to old recipes and traditions, while others have adopted and enculturated exotic plants and remedies into their diets and pharmacopoeia in new and creative ways. Now in the 21st century, in the age of the European Union and Globalization, European folk botany is once again dynamically responding to changing cultural, economic, and political contexts. The authors and studies presented in this book reflect work being conducted across Europe's many regions. They tell the story of the on-going evolution of human-plant relations in one of the most bioculturally dynamic places on the planet, and explore new approaches that link the re-evaluation of plant-based cultural heritage with the conservation and use of biocultural diversity.*

*Interest in the molecular and mechanistic aspects of cosmetic research has grown exponentially during the past decade. Herbal Principles in Cosmetics: Properties and Mechanisms of Action critically examines the botanical, ethnopharmacological, phytochemical, and molecular aspects of botanical active ingredients used in cosmetics. Along with dermat*

*Comprehensive compilation of soil seed bank data with accompanying discussion of methodology.*

*Rice*

*A Cultural Encyclopaedia*

*Flowering Plants - Dicotyledons*

*The Ecology of Seeds*

*Vegetation and Flora*

*Shanidar, the First Flower People*

*Methodology, Density and Longevity*

*Interest in ethnobotany has increased dramatically in recent years. The search for new medicines by the pharmaceutical industry has turned to plant natural products and to ethnobotanical studies as a first step in bioprospecting. These studies are making a valuable contribution to the cataloguing of biological diversity and hence to the conservation of endangered ecosystems and the human societies which depend upon them. Discussing traditional methods of plant management as well as plant use, this textbook is an authoritative and fascinating introduction to this exciting area of plant biology. Citing examples from throughout the world and drawing on a wide range of source materials, the author describes the history of the interactions between plants and people and the concepts, methodology and future direction of ethnobotanical study. Capturing current interest in traditional medicine, as well as the potential for exciting new drug discoveries, Ethnobotany:*

*Principles and Applications is an informative, stimulating and timely text which includes an extensive bibliography.*

*Computational BotanyMethods for Automated Species IdentificationSpringer*

*What determines the number and size of the seeds produced by a plant? How often should it reproduce them? How often should a plant produce them? Why and how are seeds dispersed, and what are the implications for the diversity and composition of vegetation? These are just some of the questions tackled in this wide-ranging review of the role of seeds in the ecology of plants. The authors bring together information on the ecological aspects of seed biology, starting with a consideration of reproductive strategies in seed plants and progressing through the life cycle, covering seed maturation, dispersal, storage in the soil, dormancy, germination, seedling establishment, and regeneration in the field. The text encompasses a wide range of concepts of general relevance to plant ecology, reflecting the central role that the study of seed ecology has played in elucidating many fundamental aspects of plant community function.*

*This book discusses innovative methods for mining information from images of plants, especially leaves, and highlights the diagnostic features that can be implemented in fully automatic systems for identifying plant species. Adopting a multidisciplinary approach, it explores the problem of plant species identification, covering both the concepts of taxonomy and morphology. It then provides an overview of morphometrics, including the historical background and the main steps in the morphometric analysis of leaves together with a number of applications. The core of the book focuses on novel diagnostic methods for plant species identification developed from a computer scientist's perspective. It then concludes with a chapter on the characterization of botanists' visions, which highlights important cognitive aspects that can be implemented in a computer system to more accurately replicate the human expert's fixation process. The book not only represents an authoritative guide to advanced computational tools for plant identification, but provides experts in botany, computer science and pattern recognition with new ideas and challenges. As such it is expected to foster both closer collaborations and further technological developments in the emerging field of automatic plant identification.*

*Herbal Principles in Cosmetics*

*Material Culture Studies in America*

*Magnoliid, Hamamelid and Caryophyllid Families*

*People, Health and Wild Plant Resources*

*The Ornaments of Life*

*Ethnobiology*

*Footprints of the Forest*

*Traditional Chinese medicine commonly prescribes herbal formulas for the prevention and treatment of diseases. Shengmai San, a famous Chinese medicinal formula that has been used for more than eight hundred years in China, is comprised of Radix Ginseng, Fructus Schisandre and Radix Ophiopogonis. Traditionally, Shengmai San is used for the treatment of excessive loss of essence Qi and body fluid that threaten heart failure, particularly in the summer when heat exhaustion and profuse sweating commonly occur. This book provides a comprehensive treatise on the historical, phytochemical, pharmacological/toxicological, clinical as well as pharmaceutical aspects of Shengmai San and its component herbs.*

*The book presents reviews and case studies of traditional veterinary knowledge and practice, along with historical perspectives, theoretical discussions and research methodologies, covering nearly 100 diseases and more than 300 medicinal plants and other traditional materia medica.*

*The average kilometer of tropical rainforest is teeming with life; it contains thousands and species of plants and animals. As The Ornaments of Life reveals, many of the most colorful and eye-catching rainforest inhabitants—toucans, monkeys, leaf-nosed bats, and hummingbirds to name a few—are an important component of the infrastructure that supports life in the forest. These fruit-and-nectar eating birds and mammals pollinate the flowers and disperse the seeds of hundreds of tropical plants, and unlike temperate communities, much of this greenery relies exclusively on animals for reproduction. Synthesizing recent research by ecologists and evolutionary biologists, Theodore H. Fleming and W. John Kress demonstrate the tremendous functional and evolutionary importance of these tropical pollinators and fugivores. They shed light on how these mutually symbiotic relationships evolved and lay out the current conservation status of these essential species. In order to illustrate the striking beauty of these "ornaments" of the rainforest, the authors have included a series of breathtaking color plates and full-color graphs and diagrams.*

*The history of life on Earth is dominated by extinction events so numerous that over 99.9% of the species ever to have existed are gone forever. If animals could talk, we would ask them to recall their own ancestors, in particular the secrets as to how they avoided almost inevitable annihilation in the face of daily assaults by predators, climatic cataclysms, deadly infections and innate diseases. In Tears of the Cheetha, medical geneticist and conservationist Stephen J. O'Brien narrates fast-moving science adventure stories that solve the mysteries of survival among the earth's most endangered and beloved wildlife. Here we uncover the secret histories of exotic species such as Indonesian orangutans, humpback whales, and the imperiled cheetah-the world's fastest animal which nonetheless cannot escape its own genetic weaknesses. Among these genetic detective stories we also discover how the Serengeti lions have lived with FIV (the feline version of HIV), where giant pandas really come from, how bold genetic action pulled the Florida panther from the edge of extinction, how the survivors of the medieval Black Death passed on a genetic gift to their descendants, and how mapping the genome of the domestic cat solved a murder case in Canada. With each riveting account of animal resilience and adaptation, a remarkable parallel in human nature is drawn, adding yet another rationale for species conservation-mining their genomes for cures to our own fatal diseases. Tears of the Cheetha offers a fascinating glimpse of the insight gained when geneticists venture into the wild.*

*Plants, People, and Culture*

*Methods for Automated Species Identification*

*The Saami*

*Stereophyllaceae*

*Shengmai San*

*Edible Medicinal And Non Medicinal Plants*

*Genetics and Biodiversity*

*Malaria is an increasing worldwide threat, with more than three hundred million infections and one million deaths every year. The worlds poorest are the worst affected, and many treat themselves with traditional herbal medicines. These are often more available and affordable, and sometimes are perceived as more effective than conventional antimala*

*This volume - the first of this series dealing with angiosperms - comprises the treatments of 73 families, representing three major blocks of the dicotyledons: magnoliids, centrosperms, and hamamelids. These blocks are generally recognized as subclasses in modern textbooks and works of reference. We consider them a convenient means for structuring the hundreds of di cotyledon families, but are far from taking them at face value for biological, let alone mono phyletic entities. Angiosperm taxa above the rank of family are little consolidated, as is easily seen when comparing various modern classifications. Genera and families, in contrast, are comparatively stable units -and they are important in practical terms. The genus is the taxon most frequently recognized as a distinct entity even by the layman, and generic names provide the key to all in formation available about plants. The family is, as a rule, homogeneous enough to convey niently summarize biological information, yet comprehensive enough to avoid excessive redundancy. The emphasis in this series is, therefore, primarily on families and genera.*

*It is possible that plants have shaped the very "cultures" Using riveting stories of fieldwork in remote villages, two of the world ' s leading ethnobotanists argue that our past and our future are deeply intertwined with plants. Creating massive sea craft from plants, indigenous shipwrights spurred the navigation of the world ' s oceans. Today, indigenous agricultural innovations continue to feed, clothe, and heal the world ' s population. One out of four prescription drugs, for example, were discovered from plants used by traditional healers. Objects as common as baskets for winnowing or wooden boxes to store feathers were ornamented with traditional designs demonstrating the human ability to understand our environment and to perceive the cosmos. Throughout the world, the human body has been used as the ultimate canvas for plant-based adornment as well as indelible design using tattoo inks. Plants also garnered religious significance, both as offerings to the gods and as a doorway into the other world. Indigenous claims that plants themselves are sacred is leading to a startling reformulation of conservation. The authors argue that conservation goals can best be achieved by learning from, rather than opposing, indigenous peoples and their beliefs. KEY FEATURES • An engrossing narrative that invites the reader to personally engage with the relationship between plants, people, and culture • Full-color illustrations throughout—including many original photographs captured by the authors during fieldwork • New to this edition—"Plants That Harm," a chapter that examines the dangers of poisonous plants and the promise that their study holds for novel treatments for some of our most serious diseases, including Alzheimer ' s and substance addiction • Additional readings at the end of each chapter to encourage further exploration • Boxed features on selected topics that offer further insight • Provocative questions to facilitate group discussion Designed for the college classroom as well as for lay readers, this update of Plants, People, and Culture entices the reader with firsthand stories of fieldwork, spectacular illustrations, and a deep respect for both indigenous peoples and the earth ' s natural heritage.*

*"The exploration of Shanidar Cave in Iraq has resulted in one of the most significant archaeological finds of recent years--the first archaeological traces of 'human nature.' And Ralph Solecki's firsthand account superbly communicates the excitement, the continual surprises, the labor, ingenuity, and technical subtlety that attended the discovery"--Book jacket.*

*Tears of the Cheetha*

*Tree Thinking*

*Plant Life of Palestine*

*The Herbarium Handbook*

*Past Promise and Future Prospects*

*An Introduction to Phylogenetic Biology*

*Botanical Microtechnique and Cytochemistry*

*Introduction; Institutional resources; Recent approaches in morphology and anatomy; Karyology and genetics; Ecology and geography; Chemistry, taxonomy and systematics; Data processing and taxonomy; Taxonomic priorities.*

*Includes information on Australia, calendars, creation myths, directions, epics, fish, folksonomy, genetics, grammar, Himalayan mountains, horse, indigenous people, knowledge, literacy, maps, metaphor, months, naming, nomads, oral traditions, Os (middle Chulym), Papua New Guinea, place names, reindeer, rivers, shamans, sign languages, singing, song, species, taxonomy, units of time, time reckoning, Tofa (Tofalar, Karagas), Tuvan, writing systems, Yakaghir, etc.*

*This collection attempts to integrate work pertaining to a fundamental question in plant evolution: What are the molecular underpinnings for the origin of different plant forms? Among the many facets this question touches are the transition to land, the emergence of vascular plants, the origin of the seed and the origin and diversification of floral form. We aim to bring to the forefront the most salient and original plant systems and approaches within an inclusive phylogenetic context that encompasses representatives of the major lineages of land plants.*

*Chronica Botanica New Series Of Plant Science Books, No. 33.*

*When Languages Die*

*Morphometrics for Nonmorphometricians*

*Properties and Mechanisms of Action*

*Multivariate Morphometrics*

*Pioneers in European Ethnobiology*

*Principles and Applications*

*The standard reference for all botanists, herbarium managers and technicians involved with the making and maintenance of herbarium collections. Many figures and text illustrations.*

*The single comprehensive treatment of the field, from the leading members of the Society of Ethnobiology The field of ethnobiology—the study of relationships between particular ethnic groups and their native plants and animals—has grown very rapidly in recent years, spawning numerous subfields. Ethnobiological research has produced a wide range of medicines, natural products, and new crops, as well as striking insights into human cognition, language, and environmental management behavior from prehistory to the present. This is the single authoritative source on ethnobiology, covering all aspects of the field as it is currently defined. Featuring contributions from experienced scholars and sanctioned by the Society of Ethnobiology, this concise, readable volume provides extensive coverage of ethical issues and practices as well as archaeological, ethnological, and linguistic approaches. Emphasizing basic principles and methodology, this unique textbook offers a balanced treatment of all the major subfields within ethnobiology, allowing students to begin guided research in any related area—from archaeoethnology to ethnology to agroecology. Each chapter includes a basic introduction to each topic, is written by a leading specialist in the specific area addressed, and comes with a full bibliography citing major works in the area. All chapters cover recent research, and many are new in approach; most chapters present unpublished or very recently published new research. Featured are clear, distinctive treatments of areas such as ethnozoology, linguistic ethnobiology, traditional education, ethnoecology, and indigenous perspectives. Methodology and ethical action are also covered up to current practice. Ethnobiology is a specialized textbook for advanced undergraduates and graduate students; it is suitable for advanced level ethnobotany, ethnobiology, cultural and political ecology, and archaeologically related courses. Research institutes will also find this work valuable, as will any reader with an interest in ethnobiological fields.*

*Baum and Smith, both professors, evolutionary biology and researchers in the field of systematics, present this highly accessible introduction to phylogenetics and its importance in modern biology. Ever since Darwin, the evolutionary histories of organisms have been portrayed in the form of branching trees or "phylogenies." However, the broad significance of the phylogenetic trees has come to be appreciated only quite recently. Phylogenetics has myriad applications in biology, from discovering the features present in ancestral organisms, to finding the sources of invasive species and infectious diseases, to identifying our closest living (and extinct) hominid relatives. Taking a conceptual approach, Tree Thinking introduces readers to the interpretation of phylogenetic trees, how these trees can be reconstructed, and how they can be used to answer biological questions. Examples and vivid metaphors are incorporated throughout, and each chapter concludes with a set of problems, valuable for both students and teachers. Tree Thinking is must-have textbook for any student seeking a solid foundation in this fundamental area of evolutionary biology.*

*This book provides an illustrated guide to the Hawaiian native flora. It includes substantial written material that is used broadly to both the general public and to a technical audience.*

*The Extinction of the World's Languages and the Erosion of Human Knowledge*

*Traditional Medicinal Plants and Malaria*

*Rhodiola rosea*

*NTSYS-pc*

*A Broader View for Plant EvoDevo: Novel Approaches for Diverse Model Systems*

*The Science of Ethnobotany*

*Mountain Flora of Greece*

*This comprehensive account of the relationship between the Amazonian people and their botanical environment documents how the Ka'apor use, manage, name and classify hundreds of plant species found in their habitat.*

*The first of two volumes addressing the dearth of recent detailed Greek flora.*

*This is a modern reference work about the Saami, a northern indigenous people living in four states -- Finland, Norway, Russia and Sweden. It is the outcome of a project launched and co-ordinated by the Saami Studies Work Group of the University of Helsinki. The work presents the national character of the Saami and its manifestations from a point of view located within the Saami culture itself. It is thus part of the great change in scholarship about the Saami which began in the 1970s: the shift from Lappology to Saami Studies. In general and specialised articles, the encyclopaedia presents not only the languages, history, mythology, folklore, music, economy, livelihoods and media of the Saami but also the indigenous peoples movement, human rights questions, education, art, social conditions, and so on. The nature and environment of Sápmi (Saamiand) are also dealt with as important background factors. Cultural words and concepts that are characteristic of Saami culture are defined, and there are etymological articles about many Saami words. The work is illustrated with numerous photographs and maps. Particular emphasis has been given to information about minority groups within the Saami people, such as the Saamis of the Kola Peninsula and the Inari and Skolt Saamis, who have hitherto been largely ignored by mainstream Saami Studies, and it has been the committee's concern to ensure that the voices of the different Saami groups themselves are heard.*

*Academia to Biotechnology deals with both the abstract and practical aspects of moving from a university laboratory to a position in the biotech industry. Each chapter lists common and unique features to evaluate breaking down complex decisions into manageable elements. Several sections provide "how to" guides for the preparation of manuscripts, patents, grants, and internal company documents. Written by an experienced academician and successful biotechnology entrepreneur Reviews the basic tools taught in a traditional university Identifies new ways these these tools will be used in the corporate world Details the 'nuts and bolts' necessary to negotiate a successful position in the biotech industry*

*Volume 3, Fruits*

*Career Changes at any Stage*

*Origin, Antiquity and History*

*The Genetic Secrets of Our Animal Ancestors*

*Ethnobiology at the Millennium*

*The Genus Melochia L. (Sterculiaceae)*

*Danube Delta*

*This book continues as volume 3 of a multi-compendium on Edible Medicinal and Non-Medicinal Plants. It covers edible fruits/seeds used fresh or processed, as vegetables, spices, stimulants, edible oils and beverages. It encompasses species from the following families: Ginkgoaceae, Gnetaceae, Juglandaceae, Lauraceae, Lecythidaceae, Magnoliaceae, Malpighiaceae, Malvaceae, Marantaceae, Meliaceae, Moraceae, Moringaceae, Myrtaceae, Myricaceae, Myristicaceae and Myrsaceae. This work will be of significant interest to scientists, researchers, medical practitioners, pharmacologists, ethnobotanists, horticulturists, food nutritionists, agriculturists, botanists, conservationists, lecturers, students and the general public. Topics covered include: taxonomy; common/English and vernacular names; origin and distribution; agroecology; edible plant parts and uses; botany; nutritive and pharmacological properties, medicinal uses and research findings; nonedible uses; and selected references.*

*Israel and Jordan*

*The Soil Seed Banks of North West Europe*

*Hawaiian Plant Life*

*The Mummies from Qilakitsq - Eskimos in the 15th Century*

*Ka'apor Ethnobotany-- the Historical Ecology of Plant Utilization by an Amazonian People*

*Ethnobotany in the New Europe*