



# Ethnobotany of Northern Africa and Levant – Book Review

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## Book Review

*Ethnobotany of Northern Africa and Levant*, edited by Rainer W. Bussmann, Mostafa Elachouri, and Zaal Kikvidze. Springer Nature Switzerland AG, 2024, pp 2.157, €379.99 (Hardcover), €406.59 (eBook), ISBN 9783031397943 (Hardcover), SBN 9783031431050 (eBook)

The book *Ethnobotany of Northern Africa and Levante*, edited by Rainer W. Bussmann, Mostafa Elachouri, and Zaal Kikvidze, provides a comprehensive analysis of ethnobotanical knowledge across North Africa and the Levant. This scholarly work, part of the *Ethnobotany of Mountain Regions series*, explores the intricate relationships between communities and their botanical environments within culturally and ecologically diverse landscapes. It offers significant insights into traditional ethnobotanical practices, medicinal plants, and contemporary issues of conservation and sustainable development.

The book is divided into two primary sections. Part 1 effectively sets the foundation by providing a systematic introduction to the ethnobotanical contexts of North Africa and the Levant, detailing the geographical, ecological, and socio-cultural features of each region. Editors ensure the regional context is presented, highlighting the intricate relationships between human societies and their local plant resources. The coverage is comprehensive, discussing diverse countries such as Morocco, Algeria, Tunisia, Libya, Egypt, Syria, Jordan, Lebanon, Palestine, Israel, and Mauritania. Notably, the book succeeds in illustrating the botanical richness and cultural diversity across these regions. However, there is some inconsistency in the depth of information provided; countries like Morocco, Egypt, and Algeria are discussed in greater detail, while regions such as Libya, Cyprus, and Mauritania are comparatively less represented, somewhat limiting the overall balance.

A notable strength of this section is the robust analysis of how cultural and social factors shape ethnobotanical practices. The authors skillfully demonstrate the connection between traditional knowledge, local cultural heritage, daily practices, and conservation efforts. Yet, there is potential for a deeper examination of contemporary global influences and socio-economic changes affecting traditional plant use practices in specific countries.

The methodologies are thorough and supported by substantial empirical evidence and extensive literature. However, there is room for enhancing the transparency and detail of methodological descriptions. Greater elaboration on the specific research methods would enable easier replication and expansion of studies by other researchers interested in ethnobotanical methods.

Overall, Part I significantly contributes to ethnobotanical scholarship, providing valuable foundational knowledge for understanding the complex dynamics between humans and plants across North Africa and the Levant. It particularly supports further research in sustainable plant use, conservation strategies, and cultural heritage preservation. Addressing inconsistencies in regional representation could further improve the scholarly impact of the work.

This book is highly recommended for academics, researchers, policymakers, conservation practitioners, and anyone interested in ethnobotany, biodiversity conservation, and the preservation of cultural heritage within these regions.

In Part 2, Volume 1, the book introduces the first set of plant species found in North Africa and the Levant, covering approximately 100–150 species from various botanical families. This section explores traditional uses, pharmacological properties, and ecological roles, emphasizing their significance in local cultures and medicinal practices. It lays the foundation for subsequent volumes by highlighting important species and their roles in both traditional and scientific contexts. The knowledge compiled here is valuable for ethnobotanists, pharmacologists, conservationists, and policymakers working toward the sustainable use of plant biodiversity.

From an ethnobotanical perspective, this volume details how plants have historically been used for healing, nutrition, and cultural rituals. Many species play a key role in folk medicine, particularly in treating wounds, digestive disorders, and respiratory ailments. The book documents local knowledge systems and the transmission of plant-based remedies through generations. From a pharmacological and health perspective, it highlights bioactive compounds such as flavonoids, alkaloids, and essential oils, known for their antioxidant, antimicrobial, and anti-inflammatory properties. Some species have been scientifically validated for their medicinal efficacy, demonstrating the connection between traditional wisdom and modern pharmacology. Additionally, the book addresses environmental and conservation concerns, noting that many species face threats from habitat loss, overharvesting, and climate change. It emphasizes the need for sustainable harvesting practices and conservation initiatives to protect these valuable plants.

In Part 2, Volume 2, this book examines 202 plant species from 74 botanical families found across North Africa and the Levant. The main focus of this section is to explore the relationship between communities and plants in terms of traditional use, pharmacology, health benefits, as well as their ecological and social relevance to local populations. From an ethnobotanical perspective, this section provides an in-depth analysis of how various plant species are utilized for medicine, food, and cultural practices. The study not only discusses the ecological aspects of plants but also highlights how certain species play a crucial role in local knowledge systems and cultural traditions.

From a pharmacological and health perspective, the book highlights the bioactive compounds present in various plant species and their potential in to treat diseases such as infections, digestive disorders, and inflammation. Several species have had their effectiveness confirmed through modern scientific research, demonstrating the synergy between traditional knowledge and evidence-based pharmacological studies. This integration opens opportunities for the development of standardized plant-based medicines. Additionally, the book explores the role of medicinal plants within the social and economic systems of local communities. These plants are not only used in traditional medicine but also hold significant economic value as commodities in local trade. However, overexploitation and environmental changes have led to the risk of scarcity for some species. As a result, conservation efforts are a major focus, emphasizing the importance of sustainable utilization and protection of species at risk of extinction.

In Part 2, Volume 3, the book provides an in-depth analysis of 2,039 plant species from 155 botanical families, focusing on the relationship between humans and plants in the context of ethnobotany and modern scientific research. It explores the traditional uses of plants in North Africa and the Levant, including their role as medicinal resources, food sources, and cultural and spiritual practices. Additionally, the ecological role of plants in maintaining environmental balance is highlighted, emphasizing that many species are not only valuable for their medicinal and economic benefits but also contribute to ecosystem stability.

From a pharmacological and health perspective, the book presents empirical data supporting the effectiveness of bioactive compounds such as antioxidants, anti-inflammatory agents, and antibacterial properties, which have been validated through scientific studies. The integration of ethnobotanical knowledge with pharmacological research demonstrates how traditional wisdom can be scientifically confirmed, making this book a valuable reference for academics and healthcare practitioners interested in plant-based pharmacology. Furthermore, the book highlights the significance of plants within local communities and how knowledge about their use has been passed down through generations. However, threats such as overexploitation

and climate change are increasingly endangering the sustainability of certain species. As a result, the importance of biodiversity conservation and the protection of traditional knowledge is a key focus of this book, aiming to support the sustainable use of natural resources and plant-based medicinal practices.

One of the book's major strengths is its comprehensive coverage, providing an in-depth look at the ethnobotanical practices of an entire geographic region, making it a valuable resource for researchers, conservationists, and policymakers. The inclusion of detailed botanical classifications, ethnopharmacological studies, and references to traditional knowledge ensures the scientific credibility of the work. Furthermore, its interdisciplinary approach integrates ethnobotany, pharmacology, anthropology, and environmental science, making it appealing to a broad audience across multiple disciplines.

Despite its many strengths, the book has some limitations. While it extensively covers traditional uses, it lacks discussion on how these plants are integrated into modern medicine and industry. Many studies presented are qualitative, and a stronger incorporation of quantitative analyses on plant usage patterns and conservation status could enhance the findings. Additionally, the impact of ethnobotanical practices on local economies and livelihoods could be further explored, providing a more holistic view of their significance. From a methodological perspective, the authors employ extensive literature reviews complemented by historical and contemporary data, effectively grounding their discussions academically. Nonetheless, future editions could enhance reader engagement by addressing the slight imbalance in regional representation.

Overall, *Ethnobotany of Northern Africa and Levante* is a significant contribution to the field of ethnobotany, providing essential documentation of plant-based knowledge in a historically rich and ecologically diverse region. The book is valuable for scholars, practitioners, and policymakers interested in biodiversity conservation, traditional medicine, and sustainable development. Future research could focus on integrating traditional knowledge with modern science to develop sustainable solutions for plant conservation and utilization.

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### **Book Reviewed**

Bussmann RW, Elachouri M, Kikvidze Z (eds). 2024. *Ethnobotany of Northern Africa and Levant*. Springer Nature, Cham, Switzerland.