



Indian Ethnobotany: Emerging Trends

Ashok K. Jain

Indian Ethnobotany: Emerging Trends

(Dr. S.K. Jain Felicitation Volume)

Editor

Prof. Ashok K. Jain



Published by:

Scientific Publishers (India)
5 A, New Pali Road, P.O. Box 91
Jodhpur 342 001 (India)

E-mail: info@scientificpub.com
Website: www.scientificpub.com

Branch Office

Scientific Publishers (India)
4806/24, Ansari Road, Daryaganj
New Delhi - 110 002 (India)

© 2016, Ashok K. Jain

All rights reserved. No part of this publication or the information contained herein may be reproduced, adapted, abridged, translated, stored in a retrieval system, computer system, photographic or other systems or transmitted in any form or by any means, electronic, mechanical, by photocopying, recording or otherwise, without written prior permission from the author and the publishers.

Disclaimer: Whereas every effort has been made to avoid errors and omissions, this publication is being sold on the understanding that neither the author nor the publishers nor the printers would be liable in any manner to any person either for an error or for an omission in this publication, or for any action to be taken on the basis of this work. Any inadvertent discrepancy noted may be brought to the attention of the publishers, for rectifying it in future editions, if published.

ISBN: 978-81-7233-960-9

eISBN: 978-93-86102-12-6

Printed in India

CONTENTS

<i>Foreword</i>	<i>v</i>
<i>Preface</i>	<i>vii</i>
<i>Contributors</i>	<i>ix</i>

SECTION – A

1.	Ethnobotany, Ethnobiology, Ethnopharmacology, Bioprospecting of Traditional Knowledge and Evolution of Benefit Sharing – <i>P. Pushpangadan, V. George, T.P. Ijinu & S. Rajasekharan</i>	1
2.	Role of Ethnobotany in search of newer Drug Plants & in Conservation of Biological Diversity: Some concerns & issues – <i>R. R. Rao</i>	24
3.	Promising Ethnobotanical Plants and Prospects of Plant based Cottage Industries in Tribal areas of Odisha, India – <i>Harish Singh</i>	33
4.	Folklore Driven Osteogenic Compounds for Modern Therapeutics from Fracture Healing Plants of Uttarakhand Himalaya – <i>K. R. Arya & Chetan Sharma</i>	51
5.	Restoration Ethnobotany: Applying Traditional Ecological Knowledge – <i>Veena Chandra</i>	58
6.	Wild Edible Plants used by the Dimasa tribe of Barak Valley (Assam) – <i>Madhumita Nath, BK Dutta & PK Hajra</i>	71
7.	Edible Plants of Ladakh used in Ethnic Food – <i>D.P. Nagar & Ashok K. Jain</i>	79
8.	Bark Drugs as Indian Ethnomedicine - Modern Therapeutics and Future Prospects – <i>Sayyada Khatoon & Saba Irshad</i>	87
9.	Ethnobotanical Studies in North East India: A Review – <i>A. A. Mao & D.K. Roy</i>	99

10. Unique Floral Diversity and its Cultural Intricacy with Tribals of Rajasthan
– Anita Jain & Satish Kumar Sharma 113
11. Ethno-conservation of Threatened Plants of Western Himalaya - Traditional Practices and Current Scenario
– S.K. Srivastava and Prashant K. Pusalkar 122
12. Floristic and Ethnobotanical Studies in Residuary Andhra Pradesh
– T. Pullaiah, S. Sandhya Rani, K. Sri Rama Murthy & S. Karuppusamy 138
13. The Saga of Indian Sacred Plants
– R.L.S. Sikarwar 162
14. Popular Sacred Plants in Prabha't Samgiita
– Vartika Jain 181
15. Ethnolichenological Studies in India: Future Prospects
– D. K. Upreti, Rajesh Bajpai, S. Nayaka & B. N. Singh 195
16. Changing Trends and Emerging Challenges in Plant Taxonomy with Particular Reference to India
– R.R. Rao 234
17. A Revisit to the Taxonomy of Indian *Citrus* L. (Rutaceae)
– K N Nair & Susheel Kumar 251
18. Ethno-veterinary Practices in India: A Review
– Sushmita Shrivastava & Ashok K. Jain 276

SECTION – B

19. Golden leaves from the Life of Dr S.K. Jain: Who Nurtured ethnobotany for over half a Century
– Sudhir Chandra 289
20. Botanical Survey of India: The Epicenter of Ethnobotanical Studies of Dr. S.K. Jain
– A. K. Sahoo 315
21. Institute of Ethnobiology: A Treasure of Ethnobotanical Knowledge
– Ashok K. Jain 323
22. Personal Glimpses with Dr. S. K. Jain 331

FOREWORD

It is a matter of great pleasure to know that a “Felicitation Volume” is being released to commemorate the 90th birth day of Dr. S.K. Jain the “Father of Indian Ethnobotany”.

The traditional knowledge of plants and their uses are fast disappearing not in India but throughout the world. The fast pace of developmental activities not only affected the biodiversity but also exploited the traditional knowledge of the country up to a greater extent.

The knowledge of folk medicine in India survived mostly among the village medicine or practiced as house hold remedies. The scientific community does not take seriously the ethnobotanical information until eighties of the last century. **The contributions of Dr. Jain in the popularization of ethnobotany at international level are truly monumental.** The motivation and guidance of Dr. S.K. Jain brought about a sea change in the field of ethnobotany in India and documentation of traditional knowledge initiated in more systematic manner. The validation of existing ethnobotany information resulted into discovery of few new useful drugs.

I congratulate the contributing authors for their endeavour and bringing out this comprehensive and qualitatively important contribution in Indian ethnobotany.

An institution of ethnobotany my long standing respect to Dr. S.K. Jain who is a busy enthusiastic researcher still highly engrossed in his studies at the age of 90. With all my heart and the fervency of my soul, I pray for his long life and leadership.

Director

CSIR- National Botanical Research Institute
Rana Pratap Marg
Lucknow- 226-001 (U.P.)

Dr. Chandra Shekhar Nautiyal

Tata Innovation Fellow
FNA, FNASc, FNNAS

PREFACE

It is evident from *Rgveda* and other ancient literature that the Aryans started studying the Indian flora keenly with the intention of finding out the proper utility of plants. At several places in these scriptures, Man-Plant relationship has been mentioned. Ethnobotany, a subject of studying relationship between plants and humans, is an emerging discipline of science. Interest in ethnobotany has increased dramatically in recent years. The search for new medicines by the pharmaceutical industries has turned to plant natural products and to ethnobotanical studies as a first step in bioprospecting and crop improvement. Ethnobotanical 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. Till about thirty years ago, ethnobotany was largely, an area of academic pursuit but now has been a source of several applied aspects due to emergence of new ideas from its various disciplines. It is relevant to mention that India is a fertile area for ethnobotanical studies, mainly due to its rich floral diversity, large number of ethnic groups and dependency on bio-resources by a large section of society. Documentation of indigenous wisdom has become, of late, more essential due to the structure of the laws pertaining to patents and the increased awareness about practices of biopiracy.

Academic institutions are established for teaching, learning, research and other purposes, but some people themselves become an institute by way of their exhaustive and extraordinary contribution to the society. Dr. S.K. Jain is one such example, who nurtured and popularized Ethnobotany not only in India but at global level. Theses and publications on ethnobotany are considered incomplete without referring the work of Dr Jain. He is still as active as he was in his service days. At this time when he is running in tenth decade of his life, Dr. Jain discusses about promotion of ethnobotany with his students and colleagues and generates several new ideas for research. Even today, Indian National Science Academy New Delhi has not spared him and funded him a project on ethnobotany. Due to space constraints it was not possible to give all his contributions. One of the articles indicates about his major contributions and achievements. His entire life is certainly an inspiring source to young ethnobotanists.

The present volume comprises a good number of articles on various aspects of ethnobotany, contributed by very active and devoted ethnobotanists. The volume comprises two sections; first section mainly comprises articles on emerging trends in ethnobotany, evolution of ethnobotany in India the subjects like drug discovery, inventory of medicinal and other useful plants, ethnobotany of some specific areas, establishment of cottage industries through indigenous knowledge, threatened plant species and their conservation, importance of lower group of plants in medicine etc. Looking to his vast contribution as a successful academician, many people would

certainly be enthusiastic to know about his family, contacts, publications, projects, expeditions, achievements and working attitude, therefore, a glimpse of his biography has been included in Section-B, which also mentions about the genesis and establishment of Institute of Ethnobiology, a great academic creation of Dr. Jain for the benefit of ethnobiologists. The huge treasure of ethnobotanical information in the form of research papers, Ph.D. theses, archives, tribal exhibits, herbarium, books, photographs, illustrations etc., collected and prepared by Dr. Jain is lying in 'Institute of Ethnobiology'. A large number of archives of many great authorities is a rare collection of the institute. A good number of researchers from various universities and research organizations visit institute and take advantage of the treasure of the institute. Some close associates of Dr. Jain have also shared their personal experiences and given in 'Personal Glimpses'.

An intermediate possible benefit of this volume is that it could be used as a source of primary data as well as many new ideas emerging out from various articles.

The editor is grateful to all the authors, who have contributed their valuable articles well in time to this volume. Special thanks are due to Mr. Arbeen Ahmad Bhat and Musadiq Husain for helping in computer work.

M/s Scientific Publishers (India), Jodhpur deserve special thank for publishing the volume.

We all wish Dr. S. K. Jain a healthy and happy life.

Ashok K. Jain
Editor