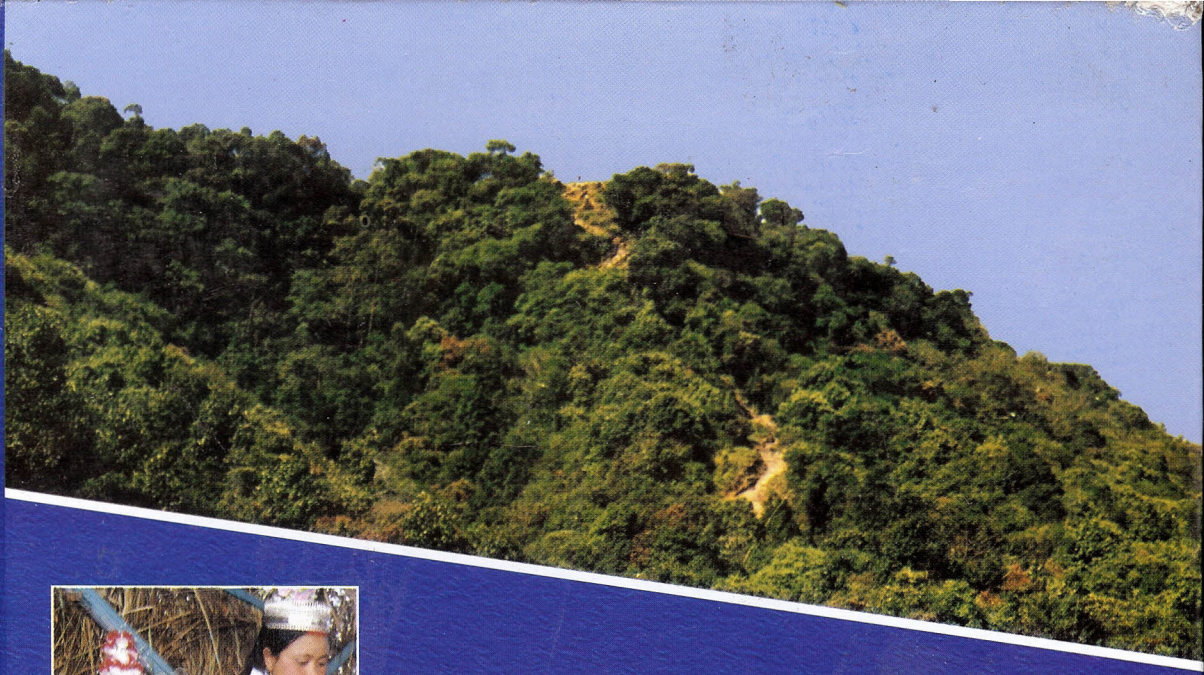

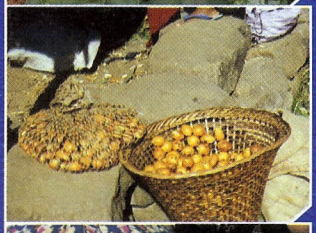

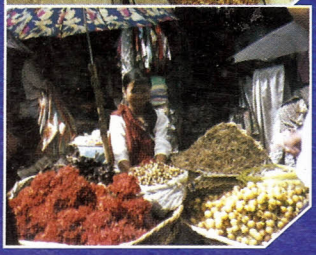

Ethnobotanical Wisdom of Khasis (*Hynñiew Treps*) of Meghalaya

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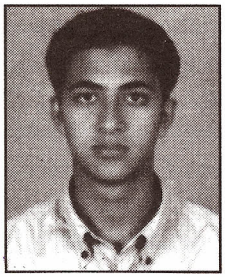

This book is dedicated to –
my dearest son ***Arshad Uddin Ahmed*** *(1980 – 2001),*
who was always an inspiration for all my works.

- Ayesha Ashraf Ahmed
Shillong

PREFACE

Biodiversity is intricately linked to cultural diversity. Northeastern India is characterised by diverse ethnic groups, which have developed their own cultures based on available natural resources, giving rise to a cultural diversity at par with the high level of biological diversity found in this region. The essential and long–standing relationships that humans have developed with these resources, embracing cultural identity, spirituality and subsistence practices that sustain communities, is the unifying theme of ethnobotany.

The work of Dr. S.K. Jain among the tribals of Central India in the early sixties not only laid the foundation of ethnobotanical studies in India but also triggered off ethnobotanical activities in different parts of the country. Launching an All India Coordinated Research Project on Ethnobiology in July 1982, founding the Society of Ethnobotanists in 1982 and publication of journal 'Ethnobotany' under the Society's banner since 1989, holding of IVth International Congress of Ethnobiology in 1994 at Lucknow, and the establishment of autonomous 'Institute of Ethnobiology' in 1995 again through the untiring efforts of Dr. Jain has established Ethnobotany as an organized discipline of study in India.

Keeping the pace with other parts of India, ethnobotanical studies have also been carried out in some parts or among some ethnic groups of northeastern India. So far about 250 publications have appeared on ethnobotany of this region. These include 12 doctoral theses. Most of the publications on ethnobotany of this region are inventories on particular classes of indigenous uses, like plants in food, medicine, other material culture, and even faith or tradition, related to conservation of bioresources, and on particular diseases or ethnic groups. Inspite of having rich biological as well as ethnic diversity no comprehensive publication on ethnobotany of any of the ethnic group or of area of the region has appeared so far.

The present work on the ethnobotany of the *Hynñiew Treps* or the Khasis of Meghalaya is an outcome of intensive field work carried out during 1996–2000. It deals with different aspects of ethnobotany and dimension of interrelationship of the Khasis and their ambient vegetation and are discussed under six broad headings.

In this work we received help and guidance from many individuals and institutions.

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Our thanks are due to Dr. P. Gogoi of Dhemaji College, Assam, Dr. B. Neogi of St. Edmund's College, Shillong, Dr. (Late) L. Myrthong of St. Edmund's College, Shillong, Professors of Shillong College Smt. Rama Sarkar, Shri Hajar Singh Nongbri, Shri Rudyson Rynjah, Smti. Bakhiamon Rynjah and to the students of Shillong College, namely, Ibadabianglin Rapthap, Ibarlin Blah, Lordcifer, Gabriel, Polygreen Khongjee, Careen Langstieh, Coming One Joy Tlong and Tynshain Dewkhi. We are also thankful to all those who helped us by providing valuable informations, who include Shri Sorendro Khongsit of Upper Shillong, Shri Sylvester Lyngdoh of Mawsynram, Shri Shine B. Kharnairie of Mawsynram, Shri Wilson Roy Diengdoh of Cherrapunjee, Shri Hamlet Kynter of Mawkaphan, Shri Lum Syiemlieh of Mawsynram, Shri J. Ryngksai of Dawki, Shri Densingh Marngar of Nongstoin, Shri Embok Malang of Nongbah, Shri Richard of Lawbah, Smti. Florida Kharsati of Shillong and Shri Sankar Das of Botanical Survey of India, Shillong, without whose help, this work would not have been completed.

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Shillong
Guwahati

A.A. Ahmed
S.K. Borthakur

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Chapter 1

INTRODUCTION

CONCEPT, SCOPE AND NATURE OF ETHNOBOTANY

Stephan Powers (1875), an American, used the term 'Aboriginal Botany' in his description of plants used by the Neeshenan Indians of the Bear River, California, for "medicine, food, textile, fabrics, ornaments, etc." The French botanist Rochebrune (1879) used 'Ethnographie botanique' for "the study of plants from archaeological sites". Both terms, however, did not find universal acceptance. It was Dr. John Harshberger of the University of Pennsylvania, who, in an address to the University Archaeological Association on 4th December 1895 suggested 'Ethnobotany' to describe "the study of plants used by primitive and aboriginal people". The term became popular immediately and was widely accepted. J. Walter Fewkes (1896) was the first after Harshberger to adopt the term for the title of a paper.

The basic concept of 'Ethnobotany' has not changed much till today But the scope of the subject Ethnobotany got enlarged greatly. There is no perfect definition which could cover its various approaches. According to Schultes (1962), "Ethnobotany is defined as the study of relationships which exist between people of a primitive society and their plant environment". Alcorn (1984) states : "It is the study of contextualised plant use". Jain (1987b) elaborated it as "the total natural and traditional relationship and the interactions between men and his surrounding plant wealth". Recently, Wickens (1990) defined ethnobotany as "the study of useful plants prior to their commercial exploitation and eventual domestication. It includes the use of plants by both tribal and non-tribal communities without any implication of primitive or developed societies". Somehow, Wickens' concept does not include harmful plants or adverse impact, which also is an essential part of this relationship. However, the last two definitions seem to describe adequately the present concept of ethnobotany.

'An Introduction to Ethnobotany' by Faulks (1958) was perhaps the first book especially on the subject; but he enlarged the scope of the book

to almost the entire field of economic botany. This view is not generally accepted now and most authors agree that ethnobotany should deal with the man-plant relationship extended to the entire range of influence of each on the other and not merely confined to the use of plants alone (Jones 1941; Schultes 1941, 1962; Porteres 1961; Jain 1967, 1986, 1987a, 1987b, 1989a, 1989b,1989c; Ford 1978; Jain & Mitra 1991; Cotton 1996; Payee 2000).

Jain (1987a, 1987b, 1989a) classified the different phases of man's relationship to the plant world into two broad categories viz., Abstract and Concrete. The abstract relationship includes faith in the good or bad powers of plants, taboos, avoidances, sacred plants, worship and folklore. The folklore includes not only fables or verses about, or having references to plants but also similies and metaphors based on plants. The concrete relationship includes mainly the material use such as food, medicine, house-building, agricultural operations, other domestic uses, trade or barter, plants in fine art and culture like paintings, carvings and decoration, and the acts of domestication, conservation, improvement or destruction of plants.

There is, however, a misconception that prevails in the minds of many people that ethnobotany is exclusively concerned with the relationships of only the primitive or aboriginal people with plants. But Jain and Mitra (1991) pointed out that the term ethnobotany should rightly be applied to natural and direct relationship with plants of any people, at any level of antiquity, primitiveness or acculturation, and even to the most sophisticated gentlemen and women, if the latter associate any particular plant with festivals or offer flowers or fruits to their Gods or deities. Yet, ethnobotany is generally taken as the science of relationships of only the primitive or aboriginal people with plants.

During the last few decades the concept, scope and nature of ethnobotany have been expanding at a very fast rate and gradually precisions are evolving (Schultes 1962, 1963; Jain 1967, 1986, 1987a, 1987b, 1989a, 1991; Ford 1978; Alcorn 1995; Jain & Mudgal 1999; Bates 2001).

Although the definitions of ethnobotany seems to be very simple, it involves the holistic approach, where the entire reciprocal and dynamic aspect of human interaction with plants is anticipated. However, studies and publications of various facets of man-plant relationship have led to the emergence of many subdisciplines of ethnobotany (Jain 1986, 1987a,

1987b, 1989a, 1991, 2001). Ethnobotanical studies on various subgroups of the plant kingdom, like algae, fungi, bryophytes, pteridophytes, lichens, etc. are subdisciplines and have been named as ethnoalgology, ethnomycology, ethnobryology, ethnopteridology, ethnolichenology, etc. Studies on special aspects of botany like system of classification, medicinal uses, palaeobotany, ecology, etymology of plant names, etc. are also subdisciplines and have been termed as ethnotaxonomy, ethnomedicobotany, palaeoethnobotany, ethnoecology, etc.

Because plants are related with all aspects of human affairs, they are studied through a number of unrelated disciplines which render the subject of ethnobotany a synthetic one. When the enquiry on ethnobotany extends beyond ordinary realm of botany and has significant inputs of other branches of science, the work becomes interdisciplinary in nature (Jain 1986, 1987a, 1987b, 1989a, 1991, 2001; Maheswari 1987; Rao 1989b). During the last few decades there have been concerted efforts to recognize ethnobotany as an interdisciplinary science and have stimulated many lines of interdisciplinary research under most specialized titles like ethnopharmacology, ethnomedicine, ethnogynaecology, ethnopaediatrics, ethnoorthpaedics, ethnoagriculture, ethnotoxicology, ethnonarcotics, ethnophytochemistry, ethnodietetics, ethnomaterology, ethnolinguistic, ethnocosmetics, etc. Very distinct demarcation between the scope of related interdisciplinary subjects is not always possible. Detail discussion on interdisciplinary aspects and on different subdisciplines were made by Jain (1986, 1987a, 1987b, 1989a, 1991, 2001). However, interdisciplinary approaches essential for ethnobotanical studies can be achieved only through collaborative work involving specialists from different disciplines (Rao 1989a, 1989b).

RELEVANCE OF ETHNOBOTANY

Due to its interdisciplinary nature and socio-economic impacts, the linkages of ethnobotany have proliferated and relevance has been established with problems of nutrition, life support species, rural healthcare, drug use and abuse, social customs, cottage industries, economic upliftment, conservation of ecosystems and natural resources, etc. (Jain 1991). As such, ethnobotanical studies have established a wide range of importance and a detail discussion was provided by Jain (1991). However, a brief account covering some of the aspects is presented here.

The importance of ethnobotanical investigation in the study of the flora of an area in general and in the survey of the plant resources in particular, has been explained by Jones (1941), Schultes (1960, 1962) and Jain (1964a, 1986, 1987a, 1987b, 1989a, 1989b, 1989c, 1991, 2000, 2001). The need for surveys of the natural resources is often emphasized for proper utilization of raw materials in developing countries like India. Ethnobotanical studies can provide clues to the utilization of plant resources of an area for the benefit of mankind by collecting information on flora and proper evaluation of indigenous knowledge.

Ethnobotanical studies help in revealing numerous germplasm stock of our cultivated plants, which have been utilized or have the potentialities of utilization by plant breeders for hybridization programme (Jain 1987a, 1987b; Arora & Nayar 1984; Arora 1987, 1991; Cunningharn 2001).

The importance of ethnobotany in drug research needs no elaboration and a detail discussion was provided by Schultes (1962) and Chadwick & Marsh (1994). Taking clues from folk uses followed by critical scientific evaluation have given to the world newer resources not only to fight diseases but also to other aspects of healthcare system.

In discussing the importance of ethnobotanical studies Jain (1986, 1987a, 1987b, 1991) summarised that the data generated by ethnobotanical research interest three broad categories of scholars : the social scientists, the biologists and the phytochemists. The social scientist is interested in data on plants associated with folktales and songs, worship, mythology, taboos, magico-religious and social ceremonies. Plants used in material culture like food, medicine and shelter interest him marginally for ethnographical records; in identifying them he rarely goes beyond local names. He might try to compare usage of plants with other societies, but he is usually not concerned with why particular plants are used and others avoided. The biologists, however, tries to analyse the reasons for selective usage, what specific characteristic do these plants have that attract the interest of the tribal? Are these food plants more delicious, nutritious, easily accessible or are they the only ones available? Do these herbs really have the medicinal properties attributed to them; what chemical fractions in these plants are useful? To biologist and phytochemist, the ethnobotanical data provide a base for new compounds with active principles. Works on phytochemistry, pharmacognosy, pharmacology and clinical trials starts; experimental science takes over.

Ethnobotanical studies can also provide valuable information on the basis of which better developmental schemes can be framed for the study area (Jain 1967, 1987a, 1991). After the local natural resources have been studied, more balanced and nutritious diets can be recommended for the people of the area (Jain 1963, 1964a; Jain & De 1964b). Some cottage industries can also be suggested for the area; articles having outside market can be encouraged. Organised collection of plant products and on the spot conversion into transportable products can also improve local economy.

While discussing the importance and need of ethnobotanical studies the remark of Jain (1986, 1991) is significant, which states: "The enquiry into unknown starts, and it is this search and research which keeps offering new drugs and new foods for the benefit of the human race".

About the Book

The book 'Ethnobotanical Wisdom of Khasis (*Hynñiew Treps*) of Meghalaya' is unique in several ways. It deals with the plant resources of that region of India which is recognized as one of the centers of biological diversity on the earth. The people, the Khasis, about which the present work deals with have not only developed their own culture based on available natural resources giving rise to a distinctive cultural identity but also develop a long-standing relationship with these resources. This not only sustains the community with a strong base of Indigenous Knowledge System (IKS) but also protects the bioresources through preservation of sacred groves. All these are rarely found in combination elsewhere to make an area rich in ethnobotany.

It is for the first time that in northeastern India with rich floristic and ethnic diversity, a holistic approach to ethnobotany of a community/area has been made. The book sets certain milestones with inclusion of several facets of ethnobotany hitherto not dealt in published ethnobotanical works in India.

This book deals with 577 species of plants and documentation of first-hand information on their diverse usages by the Khasis. The presentation categorized the different aspects of ethnobotany and narrowed down to project the total interrelationship of the Khasis and their ambient plant resources. Numerous hitherto unrecorded usages of plants discovered during intensive field work, have also been described in the book.

The book in addition to provide a complete ethnobotanical profile of the Khasis will also introduce the ethnobotanical researchers and students to new areas of study and help to appreciate the linkages of the subject with other disciplines.

About the Authors

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She has published a number of research papers in journals published from the country and abroad. Dr. Ahmed is fellow of several professional bodies and active member of various national and international associations.

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He has published more than 125 research papers in India and abroad, several popular articles and books. Worthy of special mention are his books *Illustrated Manual of Ferns of Assam* and *Diversity and Distribution of Bamboos in Assam.* He has attended a number of national and international conferences in India and abroad. Several scholars have obtained their M.Phil. and Ph.D. degree under the guidance of Dr. Borthakur. He is recipient of S.K. Jain Medal of Society of Ethnobotanists in 1998 and acts as member of several national and international professional bodies and editorial member of journals.

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