

# A REVIEW ON REANG TRIBES TRIPURA USING ETHNOBOTANICAL IN INDIA

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## ABSTRACT

Most of the tribal economies have been engaged in subsistence agriculture, Jhum, piggery, fishery and hunting. With the passage of time, tribal communities have been developed a great deal of knowledge on the use of plants and plant products in curing various diseases, ailments. In the present thesis, an attempt has been taken to investigate and document the herbal practices for ant fertility purpose by the ethnic peoples of Tripura state. The ethnic people of Tripuri and reang communities of Tripura are involved in using these medicinal plants. Traditional beliefs, concepts, knowledge and practices among from the preventing, lessening or curing disease are accessible till know. Still they depend upon such traditional healthcare and the need for immediate documentation of such knowledge and conservation of these valuable plants are emphasized to secure it for our future generation. The ethno medicinal study of plants in Tripura state discovered that some less knows medicinal plants has been used by the indigenous tribes.

**Keyword:** - Families, bionomical, Tripura, and Birth control etc.

## 1. INTRODUCTION

Interest in Ethnobotany in India in an organised manner can be said to have originated with the researches of late Dr. Janaki Ammal around the middle of the 20<sup>th</sup> century. Work on ethnobotany was considerably intensified in the Botanical Survey since the 1960s and subsequently taken up by several other institutions in our country. Some 35 years back Dr. M. S. Swaminathan, Dr. T. N. Khoshoo and Dr. S. K. Jain along with some other scientists met to review the status of Ethnobiology in India. Among other things, they considered the need for preparation of bibliography on ethnobotany and the task was entrusted to the Botanical Survey of India. In 1984 a book titled 'Bibliography of Ethnobotany' was published by Govt, of India (Jain *et al.*, 1984). When the 'All India Coordinated Project on Ethnobiology' was accorded sanction in 1982, ethnobotanical study in our country picked up momentum. The ferns have also shown to have an important role in bioremediation of wastewater. Ma *et al.* (2001) found that *Pteris vittata* L. to be a hyper-accumulator of the toxic metal Arsenic. This fern produce large biomass in short period and also accumulate Arsenic to a higher concentration upto 2.3% in its aerial portions. Similar hyper-accumulation properties of *Pteris* and many other ferns were also reported later on by many researchers. Tu *et al.* (2002) suggested that *P. vittata* could be an excellent model to study arsenic uptake, translocation, speciation, distribution and detoxification in plants and for phytoremediation of arsenic contaminated soil and water. The fern *Salvinia* exhibit equivalently high potential to remove heavy metals. *Salvinia* has wide geographical distribution, high productivity, high surface area and carboxylic content, efficiency of pollutant removal throughout different seasons, higher rate of metal removal per surface unit. Its ability of easy to grow makes it an important species to be used in phytoremediation technologies (Dhir, 2009).

## 2. MOTIVATION

Our motivation in this paper a study on some plants by tripuri and reang tribes tripura using ethnobotanical in india includes the following:

## 2.1 MEDICINAL AND ETHNOBOTANICAL IMPORTANCE

Aquatic Botany is publishing fundamental and applied studies of molecular, biochemical and physiological aspects of macroscopic aquatic plants as well as the classification, structure, function, dynamics and ecological interactions in plant-dominated aquatic communities and ecosystems. It is an outlet for papers dealing with research on the consequences of disturbance and stressors (e.g., environmental fluctuations and climate change, pollution, grazing and pathogens), use and management of aquatic plants (plant production and decomposition, commercial harvest, plant control) and the conservation of aquatic plant communities (breeding, transplantation and restoration). Even today, many tribal communities and rural population is dependent heavily upon the natural resources obtained from the surrounding forest regions for treatment of various diseases. The Indian traditional medicine based on different systems such as Ayurveda, Siddha and Unani is in use by these tribal communities. Though, lots of studies focus on the medicinal properties of plants, especially angiosperms, has been taken place, unfortunately limited amount of studies have been done to explore the medicinal potentialities of the pteridophytes. The pteridophytes constitute a significant part of the earth's plant diversity and being the second largest group of vascular plants, they form a dominant component of many plant communities. The medicinal qualities of ferns, real or imaginary, are mentioned as early as 300 B.C. by the Greek philosopher Theophrastus and by his Indian contemporaries Sushrut and Charak. In their study they assessed the medicinal uses of 33 pteridophyte species belonging to 21 families on the basis of field surveys and taxonomic identification of plants. Similarly investigated one pteridophyte with respect to ethnobotanical uses by Tripuri and Reang tribes of Tripura. The Reang medicine men use some common pteridophytes in their routine health care system to treat diseases like bones fracture, cough and cold, carbuncle, cardiac problem, pyorrhoea, headache, blood clotting, throat pain, cut or wound etc. Plants having such properties may have role in rapid discharge of the fertilized ova from the fallopian tube, inhibition of implantation due to a interruption in oestrogen- progesterone balance, foetal abortion due to lack supply of nutrients to the uterus and the embryo, and also on the male by affecting sperm count, motility, and viability. In recent years, many workers have reported a lot of traditional plants used for antifertility purpose. Most of the tribal economies have been engaged in subsistence agriculture, Jhum, piggery, fishery and hunting. With the passage of time, tribal communities have been developed a great deal of knowledge on the use of plants and plant products in curing various diseases, ailments. In the present study, an attempt has been taken to investigate and document the herbal practices for antifertility purpose by the ethnic peoples of Tripura state.

## 2.2 ETHNOBOTANICAL STUDY

A herbarium is a store house of plants, pressed and mounted on a particular size of sheets and so it serves as the function of data bank of plants (Jain, 1995). Herbaria and Musea play an important role in ethnobotanical research (Jain, 1981). The herbarium of Royal Botanical Garden, Kew in U. K., today houses about 6.5 million sheets; The Harvard University Herbarium has about 1.5 million sheets; The Central National Herbarium of Calcutta has got more than 2.5 million sheets (Jain, 1995). The outstanding work on the study of herbarium specimen was done by Altschul (1968, 1970a, 1970b) who scrutinized several hundred thousand herbarium specimens of Harvard University and recorded note of 5178 less known or unknown uses of plants. Very little work has been done on this aspect in India. Jain & Dam (1979) searched a part of about one hundred thousand specimens in North-east India (at Assam) for recording ethnobotanical data. Vast knowledge on ethnobotany exists in India from ancient time. More than 1,200 herbal plants are mentioned in ancient Indian texts (Jain & Mudgal, 1999). Written records of the use of plants for curing human and animal diseases in India can be traced back to the earliest records (4500 - 1600 BC), in the scriptures of the Hindus, the Rigveda (Jain, 1994), Ayurveda, the Indian indigenous system of medicine dating back to the Vedic ages (1500 - 800 BC), has been an integral part of Indian culture (Weiss, 1987). Curative effects of plants have long been studied by Indians since 2500 B.C. Some literature still exist viz., 'Amar-Kusha' of Amar Singha of 6th century A.D.-a lexicon mentioned about the medicinal properties of 358 drugs. In the works "Manitraya" i.e., "Panini", "Kalyayana" and "Patanjali" referred the plants yielding drug. The work of 'Ashaladhyayi,' 'Votika' and 'Mahabashya', respectively, among others have named a large number of plants having medical use. It is interesting to note that the chemistry of natural products isolated both from flora and fauna during Ayurvedic period was well understood, at least for practical purposes (Bhattacharya & Patra, 2004). Sing & Chuneekar (1972) have published a full glossary of medicinal plants included in the classical works of Charaka Samhita, Sushutra Samhita and Astanga Hridayam.

### 2.3 CONTRIBUTION OF NORTH EAST INDIA

The North-Eastern region is considered as one of the richest biodiversity centres of the Indian sub-continent. The investigations on ethnobotanical studies in the North-Eastern region have been recorded and reported by different ethnobotanists. The North East region is habitat different types of tribes who depend on the nature to meet their daily need which has been reflected in their traditional culture, beliefs, folklore etc. Few ethnobotanists explored indigenous knowledge of different ethnic groups which are settled in North East India such as Islam (1996) explored ethnobotanical knowledge of Naga, Manipuri and Assamese; Pandey *et al.* (1996) explored the traditional knowledge of Tai Alton, Tai Khamyang, Tai Trung, Sonowal Kachari and Tangal Kachari; Singh *et al.* (1996) explored the ethnobotanical knowledge of Mishing tribe; indigenous knowledge of Shan was explored by Bora & Pandey (1996); Tiwari & Tiwari (1996) studied the traditional knowledge of use plants of tribes of Arunachal Pradesh; Huidrom B.K. Singh (1996a,b) explored the indigenous knowledge of Meitei and the tribes of Tripura; Arora (1997) explored the indigenous knowledge of the tribes of North East region; Dam & Hajra (1997) studied the indigenous knowledge of Mompas tribe; Kharkongor & Joseph (1997) explored the indigenous knowledge of Khasi and Jaintia tribe. Rao (1997) studied the ethnobotanical knowledge of Naga tribe; Vasudeva & Shampru (1997) explored the indigenous knowledge of Garo tribe; Rawat & Choudhury (1998) explored the indigenous knowledge of Nishi and Apatani tribes; Lalramnghinglove (1999) studied on the indigenous knowledge of the tribes of Mizoram. The importance of ethnobotanical work in North East India has got much attention but in comparison to a large number of tribes inhabit in this region, very few tribes have been explored in relation to ethnobotanical studies (Dutta & Dutta, 2005). In last few years the research and documentation of traditional knowledge of North Eastern states has increased but in comparison to rest of India, the survey is very less though it is a vast source of indigenous knowledge (Chakraborty *et al.* 2012). reported 33 ethnomedicinal plants used by non-tribal and tribal medicine men of Tripura; Saikia *et al.* (2006) reported 85 plants which are used to cure different types of skin diseases and also as cosmetics in Assam; Sajem & Gosai (2006) worked on Jaintia tribes and reported 39 plants which are used by the tribes of North Cachar Hills of Assam; iSankaran *et al.* (2006) reported 40 edible fruits which are used by the rural people of Tripura; Bhuyan (2007) studied on plants used by different tribes of Arunachal Pradesh and reported 50 indigenous plants; Buragohain & Konwar (2007) studied on the plants which are used by Indo-Mongoloid communities of Upper Assam to cure various skin diseases and reported 68 plants; Chandra *et al.* (2007) reported 36 plants which are used to treat gastrointestinal disorders in Sikkim; Lalfakzuala *et al.* (2007) worked on ethnobotanically important plants of Mamit district of Mizoram and reported 89 plants which are used as folk medicine, food and other purposes.

### 2.4 CREDIBILITY OF MEDICO-ETHNOBOTANICAL USES OF MEMBERS OF AROID FAMILY IN ASSAM (INDIA)

Aroids or the members of Araceae Family are distributed worldwide with 117 genera and 3790 species. In India including North east India though various floristic works has been carried out very few records of ethnobotanical works can be found which are scattered in various journals and periodicals, making the data mostly not easily accessible to researchers. Cross cultural ethno-botany is essential not only in authenticating and assessing the values of plant lore's but also in credibility testing of folklore claims and also finding out the new and less known use of plants. Ethno-Pharmacology has become a scientific backbone in the development of active therapeutics based upon traditional medicine of various ethnic groups. The present communication is a review based on the reported folklore medicinal claims involving members of the Aroid family used by different tribes in Assam for various disease conditions. The present study has brought into light 82 prescriptions of plant folk medicines covering more than 60 disease conditions represented by 14 aroid species and 10 genera. Among the total plant species enumerated in this communication, positive correlation between folklore use and biological activities has been recorded in preliminary review for only 4 plant species. Here an attempt has been made to test the credibility of the folklore claims by cross cultural studies among different tribes and to corroborate the claims with reported biological activities of the species in due course for scientific validation. Aroids or the members of the Family Araceae are known for ornamental, edible as well as for medicinal uses which are distributed worldwide chiefly in tropical and subtropical regions; except at the polar regions and deserts, Aroids are found in various natural habitats such as swamps, ponds, lakes, canals, rivers to rice fields, climbers and as well as epiphytes. Some species thrive well in forest floors with good canopy coverage. This family is grouped into nine subfamilies, 117 genera and 3790 species. Members of this

family are herbs, perennial, they are climbers, floating aquatics, helophytes, and geophytes. Underground stems are absent and if present, they are in the form rhizome or tuber; with definite node and internode regions; aerial stems are evergreen; leaves alternate or apparently basal, usually petiolate with sheathing bases. Spadix bears bisexual or unisexual flowers and sometimes with a sterile, terminal appendix. Fruit usually a head of 1-to several-seeded and commonly red, green, white, or yellow, rarely blue. They also possess crystals of calcium oxalate or raphides in the tissues. In India though various floristic works has been carried out but the total reported number of distributed species varies greatly and very few records of ethno botanical works can be found which are scattered in different region of reporting. According to the Flora of British India by Hooker there are 228 species and 31 genera of Indian aroids. Karthikeyan reported 25 genera and 138 species in India and Yadav has reported 29 genera and 150 species.

### 3. CONCLUSIONS

The legal scientific name, family, local names, habit, dosages and traditional formulation of 33 species belonging to genera and 25 families are enumerated in this thesis. Ethnobotanical survey was conducted in the remote hills, forests and rural areas of Tripura, a diversified ethnic people rich state of North-Eastern India, for gathering information about traditional method of birth control. Use of medicinal plants were documented using an interview datasheet mentioning detailed information of the informants and vernacular names, parts used, method of preparation and administration modes of botanicals. Finally, collected samples of botanicals, prepared herbarium, identified and scientific names were confirmed by consulting reference herbarium specimen available in Assam University, Silchar. A total of 55 ethnomedicinal plants belonging to 42 families and 49 genera have been documented having antifertility property. Apocynaceae, Caesalpiniaceae, Combretaceae, Fabaceae were found to be the dominant families of medicinal plants used for fertility regulation. Conservation of the traditional informations should be given utmost importance in this region to prevent the rapid loss of ethnobotanical wealth.

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