



## Ethnobotanical significance of medicinal plants

Arvind Kumar Singh and Shraddha Rai\*

Department of Botany, T.D.P.G. College, V.B.S. Purvanchal University, Jaunpur - 222002, U.P., India

### ARTICLE INFO

#### Article history:

Received 3 October 2017

Received in revised form 26 October 2017

Accepted 2 November 2017

Available online 9 November 2017

#### Keywords:

Ethnobotany  
Medicinal plants  
Anthropology  
Archaeology  
Natural science

### ABSTRACT

Ethnobotany is an important branch of natural science dealing with various aspects such as anthropology, archaeology, botany, ecology, economics, medicine, religious, cultural and several other disciplines. There are several approaches for ethnobotanical research and those relevant to medicinal plants are archeological search in literature, herbaria and the field studies. It is an accepted fact that plants influenced human culture through ages and accompanied the process of civilization. Since civilization plants have been used by tribals and local people for cure of various diseases. Several difficult diseases could be cured effectively by use of herbal medicines. Traditional knowledge of medicinal plants and their use in the present days are not only useful for conservation of natural tradition and biodiversity but also community health care and drug development in the local people.

### 1. Introduction

In recent years, the use of plants in traditional medicine has increased the interest in ethnobotanical studies throughout the world. Ethnobotany is defined as the study of past and present interaction of primitive human societies and the surrounding vegetation<sup>[1,2]</sup>. The term ethnobotany was coined by J. W. Harshberger in 1895 to indicate plants utilized by arborigines. The broad definition<sup>[3]</sup> of the term ethnobotany beyond mere definition and cataloguing of plants used by primitive people and attributed to this discipline a status of study and evaluation of the knowledge all phases of plant life amongst primitive societies and effects of the vegetal environment upon the life, custom, beliefs and history of the people of such societies. Due to the interdisciplinary nature, there are some glimpses of the vastness of ethnobotany, which have great elaborated in terms of its theoretical contribution to an understanding of human plant interaction as well as for the practical application of biological knowledge of tribal people medicine, agriculture, health and industry<sup>[1]</sup>.

Plants have been used by tribal and local people for cure of various diseases. Several difficult diseases have related with vitality, diabetes, memory loss, could be used effectively by use of herbal medicine. The indigenous knowledge of medicinal plants useful for health purposes is a key cultural adaptation to having a successful life in local ecosystem<sup>[4,5]</sup>. In addition, wild plants are a source of income and employment particularly in the rural areas<sup>[6,7]</sup>. World health organization estimates, indicate that 60% of the population (mostly in developing countries) still relies on plant-based medicines for primary health care. Medicinal plants are fully capable of curing several physical and mental disorders. Not only this, physical strength and mental

brilliance can also be achieved through knowledge and application of them.

### 2. Ethnobotany: a socio-economical field

Ethnobotany is usually defined as anthropological approach to botany. Ethnobotany is defined as the study of association, interaction and interrelationship of various ethnic groups with surrounding flora. It is an accepted fact that plants have influenced human culture through ages and accompanied the process of civilization. But the critical understanding of the mode and scope of this influence has never been felt as urgent and important as it is for the present age. This feeling all over the world resulted in to the emergence of ethnobotany as a distinct academic branch of natural science. Ethnobotany represents broad and fully interdisciplinary approach to the study of human evaluation and use of plant resources in primitive or unlettered ethnic society. Nowadays, ethnobotany has become an important and crucial area of research and development in resource management, conservation of biodiversity at genetics species and ecosystem level as well as socio- economic uplift of the region. The most fundamental percept of ethnobotany is to develop comprehensive understanding and appreciation of the multidimensional perspectives of the life, culture, customs, traditions, knowledge systems, behavioural dimensions, peculiar requirements and aspirations of the tribes and aborigines of different territory. Now it is obvious that the data generated from ethnobotanical researches have brought out an indigenous knowledge system and perception, which could safely be incorporated in to developmental planning and environmental management<sup>[1,2]</sup>.

\* Corresponding author. Tel.: +918004044390; e-mail: [srvks.jnp@gmail.com](mailto:srvks.jnp@gmail.com)

### 3. Ethnobotanical uses of medicinal plants

Plants have always played a central role within indigenous cultures. Plant products are used as food, as sources of medicines, and as raw materials for the weaving of fabrics. Medicinal values of plants are known well by tribals and local peoples. The nutritional analysis of certain pseudo-cereals like *Amaranthus polygamus* and *Fagopyrum esculentum*, traditionally eaten by the tribal and hill communities of high Himalayan. It has the essential amino acids and lysine which are usually deficient in most cereals and millets. Leafy vegetables like *Lamium album* used by tribes of Gurez valley of Kashmiri rich in minerals and proteins. The seeds of *Cicer songaricum*, a wild plant growing in subalpine to alpine Himalayas contain high proteins phospholipids. It also contains about 1% lecithin, which is in great demand in pharmaceutical, cosmetic and food industries. *Adina cardifolia* and *Andrographis paniculata* are found to have remarkable hepatoprotective and immunostimulant activities. Sore and cuts are covered with the oily juice of *Pandanus smeared* with latex of breadfruit. People moisten tobacco leaves with spit saliva or heat them over the fire and press them on lesions. Quite often, after chewing *Areca* nut, spit the red juice over the sores. Sores and cuts usually fester, before or after the treatment. Leaves of tangent (Pidgin) (*Cardylins sp*) or banana are to stuck in to the lower part of bark belt to reduce the pain caused by scabies. The common green vegetable aibika (pidgin) (*Hibiscus manihot*) is eaten for general body pain and pain in to joints, legs and arms. The main nutritive value of aibika lies in its high protein to calories ratio and high minerals and vitamin content. Pain in the mouth including the tongue, palate, gums and teeth can be alleviated by chewing wild or cultivated *Areca* nut with leaves, fruits or bark of daka (*Piper betle*) and lime. Nettles are used in cases of major illness and antirheumatic. They are used in headache, backache, stomach complaints, diarrhoea, fever and general weakness. Another universal plant is ginger (*Zingiber officinale*). People use chewed ginger when they cut their hands or legs with knives and axes. In the case of cough, people eat and inhale rhizome of ginger. Pharmacognostical and antibacterial effect of different extracts of *Euphorbia hirta* L. and *E. tirucalli* L. have been studied<sup>[8,9]</sup>. Some important aspects of ethnobotanical uses of medicinal plants are given in the following Table1.

TABLE 1. Ethnobotanical uses of medicinal plants

Plant Name	Family	Part used	Application
<i>Acalypha insulana</i>	Euphorbiaceae	Leaves	Sores, wound
<i>Alsominta macrocarpa</i>	Cucurbitaceae	Fruit	Poison
<i>Alstonia scholaris</i>	Apocynaceae	Sap	Sores, wound
<i>Amomum aculeatum</i>	Zingiberaceae	Pith	In mixture for hair oil
<i>Bumbusa macrolemma</i>	Gramineae	Leaves, pith	Diarrhoea
<i>Begonia serratifetala</i>	Begoniaceae	Leaves	For pig to get pregnant
<i>Buchnera iomentosa</i>	Scrophulariaceae	Whole plants	Contraceptive
<i>Calamus vestitus</i>	Palmae	Liquid	Eye inflammation

<i>Calanthe arfakana</i>	Orchidaceae	Leaves, fruit	Hair growing , sore(dogs), scabies
<i>Chloranthus officinalis</i>	Chloranthaceae	Whole plant	Eye inflammation
<i>Clematis clemensiae</i>	Ranunculaceae	Stem	Cough, head pain
<i>Datura arborea</i>	Solanaceae	Leaves, flowers	Mosquitos
<i>Derris kovalgibberah</i>	Leguminosae	Root	Fish poison
<i>Digiteria bicornis</i>	Gramineae	Called in spell	Asking ghost who brought illness
<i>Elaeocarpus sphaericus</i>	Elaeocarpaceae	Leaves	Wounds, sores
<i>Emilia prenanthoidea</i>	Compositae	Leaves	Wounds, sores
<i>Euphorbia plumerioides</i>	Euphorbiaceae	Sap, latex	Toothache, sores, boils
<i>Ficus botryocarpa</i>	Moraceae	Sap, latex	Wound, sores
<i>Lycopodium serratum</i>	Lycopodiaceae	Whole plant	Antidote for poison
<i>Piper betle</i>	Piperaceae	leaves	Counter magic
<i>Rhododendron sp.</i>	Ericaceae	Leaves	Antidote for poison
<i>Solanum lasiocarpum</i>	Solanaceae	Leaves	Boils, abscesses
<i>Syzygium pteropodum</i>	Myrtaceae	Leaves	Counter magic
<i>Zingiber officinale</i>	Zingiberaceae	Root	Universal

### 4. Conclusion

Ethnobotany in totality is virtually a new field and if this field is investigated thoroughly and systematically it will yield result and great value to the ethnologist, archaeologist, anthropologist, plant geographers and pharmacologist etc. The herbal medicine also suit to the social and cultural needs of the people and influence the patient's physical, mental and emotional states as well. Through the indigenous knowledge of medicinal plants people can cure various diseases for successful life in local environment. These are useful for conservation of natural tradition and biodiversity and also for community health care and drug development in the local populations.

### Acknowledgement

The authors (AKS & SR) gratefully acknowledge the Head of the Botany Department, T.D.P.G. College, Jaunpur for providing necessary facilities. The authors are thankful to V.B.S. Purvanchal University, Jaunpur for providing research platform.

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