

## **Ethnobotany and Legal Aspects**

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### **Abstract:**

Ethno implying the study of races and botany is the study of plants. The learned knowledge of how various human cultures that live near to nature use biological resources is the subject of ethnobotany. As a multidisciplinary science, ethno-botany is founded on an organic and intimate connection. Ethnobotany is now a significant and critical area of research and development in the fields of resource management, sustainable biodiversity use, and socioeconomic development. Ethnobotanical knowledge helps in area of research and development in the fields of resource management, sustainable biodiversity use, and socioeconomic development. Any plants are used in agriculture, medicines, edible plants, crop plants etc.

### **Introduction:**

Dr. John W. Harshberger first used the term "ethnobotany" in 1895. Ethno implying the study of races and botany is the study of plants. The learned knowledge of how various human cultures that live near to nature use biological resources is the subject of ethnobotany. As a multidisciplinary science, ethno-botany is founded on an organic and intimate connection.

- As an interdisciplinary field of study, ethnobotany has applications in sociology, anthropology, taxonomy, phytochemistry, archaeology, ecology, agriculture, medicine, languages, and other fields.
- Ethnobotany is now a significant and critical area of research and development in the fields of resource management, sustainable biodiversity use, and socioeconomic development.
- The study of man- plant interactions in natural environment is currently being conducted by botanists, social scientists, anthropologists, and users of indigenous remedies all around the world.

**Few Branches of Ethnobotany:** ethno-algology, ethno-mycology, ethno-bryology, ethno-pteridology, ethno-lichenology, ethno-taxonomy, ethno-paleobotany, ethno-ecology, ethno-etymology, ethno-agriculture, ethno-cosmetics, ethno-dietics, ethno-musicology, ethno-toxicology, ethno-linguistic, ethno-gynaecology, ethno-archaeobotany etc., with plants and man, including both the useful and harmful aspects.

### **The significance of ethnobotany**

**Age-old knowledge:** Ethnobotanical knowledge, which provides information on traditional usage of plants and can be applied to integrated tribe development, is very old.

**Natural resource preservation:** Ethnobotany is relevant to the preservation of the natural resources that supply the raw materials for agroforestry. Numerous cultivable plant and vegetable germplasm stocks have been made known by ethnobotanical studies.

**Ethnomedicinal Plants:** Tribal communities use ethnomedicinal plants to treat illnesses and disorders such as diarrhoea, fever, skin conditions, boils, rheumatism, jaundice, infections, cough, colds, and asthma. Plant from the Apiaceae, Zingiberaceae, Begoniaceae and Euphorbiaceae families are used.

**Research Programme:** Ethnobotany comprises research initiatives in health care systems for locating life-sustaining medicine plants and emergency food plants for the wellbeing of humanity.

**Folklore collection:** Through rituals, stories, religious rites, tales, and riddles, among other things, folklore collection materials are used to appraise peoples' socioeconomic conditions and add more words to literature.



**Plant species' uses include:** Keeping track of how different plant species are used for food, medicine, fibre, fuel, building materials, narcotics, beverages, pesticides, gum, dye, perfume, incense, fine arts, culture, such as painting and carving, as well as for preservation, advancement, and destruction of plants.


### Ethnobotany as a tool to protect interest of ethnic groups:

The world's indigenous and ethnic populations have developed the skills necessary to survive in some of the universe's most harsh environments. The most intriguing characteristic of these indigenous and ethnic groups has been discovered to be that they reside in regions that are extraordinarily rich in biodiversity. The following are some of the ways ethnic and indigenous people contribute to the conservation of biodiversity:




- Plants are preserved in their natural habitats and revered by tribal people as the homes of God and Goddess.
- As a source of food, indigenous people conserve crop plants.
- Plants are preserved by tribal people in their natural habitat and used as therapeutic herbs.
- Plants are preserved in abandoned sites of shifting agriculture.
- Tribal people preserve a variety of plants as wild fruits, seeds, bulbs, roots, and tubers for food purposes.

Some worshipped plants such as:




Sl. No.	Scientific Name	Family	Purpose	Photograph
1.	<i>Magnifera indica</i> L.	Anacardiaceae	Worshipped as lord vidhyadyara	
2.	<i>Citrus medica</i> L.	Rutaceae	Worshipped as Lord Brahaspati	

3.	<i>Ocimum santum</i> L.	Lamiaceae	Worshipped as Goddess Lakshmi	
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Few crop plants are:




Sl. No.	Scientific Name	Family	Purpose	Photograph
1.	<i>Fagopyrum esculentum</i> Moench	Polygonaceae	Buckwheat consumed by N.E Indian tribes	
2.	<i>Echinochloa coloum</i> L.	Poaceae	Jungle rice consumed by Arunachal, Meghalaya tribes	
3.	<i>Entada purasaetha</i> (Syn. <i>E.phaseoloides</i> ).	Fabaceae	Worshipped as Goddess Lakshmi	

Edible plant parts




Sl. No.	Scientific Name	Family	Purpose	Photograph
1.	<i>Asparagus racemosus</i> Wild.	Liliaceae	Tuberous root & tender shoots are used by tribals of North Bengal.	
2.	<i>Knema linifolia</i> (Roxb)Warb.	Myristicaceae	Fruits are used by tribals of Manipur and Meghalaya.	
3.	<i>Colocasia esculenta</i> (L.) Schott	Aracaceae	whole plant by tribals from all over India	

Agricultural plants

Sl. No.	Scientific Name	Family	Photograph
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1.	<i>Musa acuminata</i> Colla	Musaceae	
2.	<i>Phyllanthus emblica</i> L.	Phyllanthaceae	
3.	<i>Saccharum officinarum</i> L.	Poaceae	

### Ethnomedicinal plants

Sl. No.	Scientific Name	Family	Purpose	Photograph
1.	<i>Costus speciosus</i> (J.Koing) C. Specht	Zingiberaceae	Rhizome decoction given kidney stone, burning pain during urination	
2.	<i>Croton roxburghii</i> Balakr.	Euphorbiaceae	Seeds are putative, seed oil is insecticides, plant juice is antidote to snake poison	
3.	<i>Rubiamo cordifolia</i> L.	Rubiaceae	Stem and root decoction is given for stomach ailment chest trouble, jaundice, irregular menstruation and cancer.	

### Legal Aspects of Ethnobotany

#### Biopiracy

- A situation in which indigenous knowledge of nature, which originated with indigenous people is used by others for profit without their consent, with or without payment to, or recognition of, the indigenous people themselves.

- In order to obtain a patent on technologies generated from those genetic resources, developed countries are abusing indigenous communities' genetic resources and traditional wisdom. Bio-piracy results from this.
- Bio-piracy negatively impacts the local population's way of life.
- Bio-pirates or thieves illegally deny the general public access to the benefits of medicinal plants by obtaining patents in order to profit.

**Prevention:** The Indian Government has already taken a number of measures to protect the country's economy from the potential harm that bio piracy could cause. In order to combat bio piracy, the Council for Scientific and Industrial Research and AYUSH (Ayurveda, Yoga, Unani, Siddha, and Homoeopathy) have been very vigilant.

### **Intellectual property (IP)**

Intangible works produced by the human intellect are included in the category of property known as intellectual property. With the development of contemporary biotechnology, a significant issue regarding the legal classification and treatment of commercially relevant biotechnological processes and products has come to light.

Intellectual property rights (IPR) are the legal authority to defend this property.

This covers literary, artistic, and scientific works as well as inventions in all sectors, industrial designs, trademarks, and business names, among other rights.

- Patents, copyright, trademarks, and industrial designs are the four primaries of IPR.
- The emergence of the contemporary idea of intellectual property in England in the 17th and 18th centuries.
- Although the phrase "intellectual property" first appeared in the 19th century, it wasn't until the late 20th century that it was widely accepted in the majority of the world's legal systems.

### **Traditional knowledge**

- Knowledge of ethnobotany is quite old. It provides details on the traditional uses of plant wealth that can be applied to integrated tribal development.
- The ethnobotanical studies shed light on some undiscovered useful plants and new uses of many known plants that can be exploited for creating new sources for some plant products and agro-based industries.
- Wild and domesticated species are included in ethnobotanical knowledge, which is based on observation, relationships, requirements, and traditional ways of knowing. This information evolves through time and is thus always changing and adding new discoveries, ideas, and approaches.
- Displaced or dispersed peoples lose their language, names for things, and their place in their web of ties, even though they may have passed along hundreds of generations' worth of observations and habits orally.

•As people migrate, new interactions may arise, leading to the creation or modification of ethnobotanical knowledge.

## **Conclusion**

Through enduring traditions, the ancient empiric knowledge of the close interaction between prehistoric man and flora has passed to us. Multidisciplinary and transdisciplinary investigations of this knowledge-system, which is founded on a direct interaction with the plant world, are being conducted. A significant number of unknown, little-known, or less-known uses, as well as those that are described in taboos, myths, and folklore, have been documented by ethnobotanical investigations. Ethnic and indigenous people protect the plants that provide them with wild edible food in the form of roots, tubers, rhizomes, seeds, fruits, medicinal herbs, agricultural plants, and horticultural plants. Ecological imbalance is a result of rapid industrialization and deforestation. Therefore, the importance of topics like habitat conservation is growing as a result of ethnobotanical studies. Besides this it can be also achieved through legal aspects of ethnobotany.

## **Further Reading**

S.K. Jain, 1995. Manual of Ethnobotany, Scientific Publishers, Jodhpur.

S.K. Jain (e.d.), 1981. Glimpses of Indian Ethnobotany, Oxford and I B H, New Delhi-1981

Rajiv K. Sinha, 1969. Ethnobotany The Renaissance of Traditional Herbal Medicine-INA-SHREE Publishers, Jaipur.

Colton C.M. 1997. Ethnobotany –Principles and applications, John Wiley and Sons-Chichester.