

AN ETHNOBOTANICAL SURVEY ON BEVERAGES, FUMITORIES AND MASTICATORIES USED BY THE ETHNIC PEOPLE OF JANGAL MAHAL OF WEST BENGAL, INDIA

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Abstract: Ethno-botany accounts for the study of relationship between people and plants for their use as medicines, food fodder and other house hold purposes or other words it deals with the acquired knowledge system about the use of the use full biological resources among various human communities. It also based on the natural and direct relationship of people and plants including both the fundamental and cultural aspect. In this present work, ethno botanical study on plant used for beverages, fumitories and masticatories was conducted in four villages of jangal mahal (particularly in Jhargram district) of west Bengal India. We also documented different types beverages, fumitories and masticatories used by the indigenous people like Santals, mundas, Bhumij Lodha, and Sabars. A total of 3 beverage yielding plants belonging to 3 families, 3 plants for fumitories belonging to 3 families and 2 plants for masticatories belonging to 2 families are used by the tribal's living in jangal mahal. Based on initial survey and group discussion it was found that information about those plants is mostly confined to elder people. Younger generation is ignorant about these vast resources available in their surroundings and commercialization of the narcotic plant.

Key Words: Ethno-botany, beverage plants, fumitories, masticatories.

1. INTRODUCTION:

Ethno-botany is an inter-disciplinary science including ethnology, linguistics, archaeology, pharmacology, medicine, ecology etc. The pre-historic work on Ethno-botany was done by Francisco Hernandez, personal physician of King Phillip II of Spain in between 1570-1575, wrote a 16 volumes official record. In 1874, Powers used the term "Aboriginal Botany" to refer to a "study of all the plants which the aborigine used for medicine, food, textiles, ornaments etc". In 1895 the term "Ethnobotany" was first used by J.W.Harshberger (One of the fathers of American Economic Botany) to indicate plants used by the aboriginals. In 1916 Robbins, Harrington and Freire-Marreco, wrote Ethnobotany "included all aspects of the study of plants among the primitive societies." Faulks(1958) stated that Ethnobotany encompassed the entire realm of Economic botany including the modern uses of plant. Now Ethnobotany has been interpreted as "Study of the uses, by the primitive people, of the plants of their environment."(Jones 1941, Martin 1995, Choudhary et al. 2008, Ahmad et al.2014)." The relationship between plant and man can be divided into four categories' 1. Relationships useful both to man and plant 2. Relationships useful to man but harmful to plants 3. Relationships useful to plants but harmful to man 4. Relationships harmful both to plants and man. The main tools of study of this discipline are the field study, study of ancient literature and remains. At present ethno botany is a well organised branch of science and has received enormous attention leading countries of the world like America, France, Spain , South Africa , Australia and other well reputed societies and foundations.

In India, there were extensive literature on Ethno botanical information in Sanskrit, Pali, Tamil, and other regional languages before scientifically establishment of this branch. Bodding (1925-1940) published an Ethnobotanical information on medicine by Santal tribe. Studies on Ethnobotany were initiated by DR. Ek. Janaki – Ammal . She is often remembered as "mother of Indian Ethnobotany". She studied the utility of food plants of certain tribal's of South India . From 1960 organised methodical studies on Ethno botany started under the leadership of DR. S.K.Jain, who is known as " Father of Ethnobotany". C.R.Tarafdar (1983) and D.C.Pal (1986) have made good contributions to the Indian Ethnobotany .

In our country plants used as beverage, masticatories and fumitories by many ethnic communities. The substances which are chewed and sucked for some physiological satisfaction that gives rise to a feeling of well being, regarded as masticatories (Faulks1958). The plant species used as fumitories are either from wild or from natural sources. They are used either in fresh or in dried smoking purposes. It has now become more important than ever to record and preserves the traditional knowledge on medicinal plants, in order to aid the discovery of new drugs and

possibly to find improved applications of traditional medicine (Kone and Atindehou 2008, Tripathi et al.2013, Bhakta et al .2017.) Ethnobotanical studies are today recognised as the most effective method of identifying new beneficial bio active compounds (Thirumalai et al 2009).

The above idea keeping on mind, In this present work, ethno botanical study on plant used for beverages, fumitories and masticatories was conducted in four villages of jangal mahal (particularly in Jhargram district) of west Bengal, India.

2. MATERIALS AND METHODS:

(i). Study Area (Geographic Location):

District	Village	Longitude-Latitude	Gram panchayat	Total no of house
Jhargram	Dhansol	22.5493178°N, 87.210987°E	Chandri	205
Jhargram	Dumaria	22.4843110°N,86.818974°E	Saria	408
Jhargram	hatibari	22.207468°N, 86.717113°E	Lodhasuli	225
Jhargram	Jarkasuli	22.545420°N, 86.818974°E	Manikpara	108

(ii) Ethnobotanical Data Collection

Ethnobotanical data were collected mainly based on semi- structured interviews with selected knowledgeable elders (Martin 1995, Cotton 1996). Information regarding the gathering, preparation, use, previous and current status was collected. In the study area, interviews and discussion were conducted mainly in Bengali language but in few places Alchiki (native language of Santals) was used. At every place, approx 10-15 people (both men and women) in the age class of 20-35, 45-50 and above 50 were involved .But most of the data was collected from the knowledgeable and experienced elders who belonged to the age of above 50. The data collected on a particular species are verified by discussing about the same species with some other tribal's and this helps to bring out quite reliable information. The data were recorded in the field note-book on the plant parts used, their processing, preparation and other uses as given by the tribal informants.

(iii) Vegetation Data Collection

Vegetation data were collected in order to classify and describe plant communities in the wild and to assess the distribution of the reported plants in the area.

(iv) Plant Identification

Images were collected for each plant species encountered with the exception of some very common cultivated plants, which were identified in the field. Preliminary identification of the collected specimens was made in the field, and then they were dried, deep frozen and identified carefully.

3. DATA ANALYSIS AND PRESENTATION:

Descriptive statistical method was employed to analyse and summarize the ethno botanical data on the reported plants and the associated knowledge. The relative importance of the different plants in a given community was determined based on the consensus of informant's responses. The informant's consensus was also used to investigate the effectiveness of the plants to treat a particular ailment, or of physiological satisfaction.(Phillips and co-workers ,1994)

4. RESULTS AND DISCUSSION

In our investigation we found that tribal people of Jangal Mahal (particularly in Jhargram district) of West Bengal, mainly the Santals, Bhumij, Munda, Lodha and Sabar are using local plants species as beverage ,masticatories, fumitories in different ways which are given in Table-1, Table-3, and Table- 4.

Table-1: Some Indigenous Beverages taken by tribal people:-

Name of beverages	Local Name	Tribes using these	Main Ingredients
Mahuli wine	Mahua	Santal, Munda, Bhumij, Lodha	Flower of <i>Madhuca longifolia</i> (L.)J.F.Macbr and ranu tablets (Bakhar)
Palm wine	Tari	Santal, Munda, Sabar Bhumij, Lodha,	Stem of <i>Phoenix dactylifera</i> L. and black salt.
Rice beer	Haria	Santal, Munda.	Boiled grains of <i>Oryza sativa</i> L. and ranu Tablets (Bakhar)

Table-2: Ingredients of ranu tablets (Bakhar)

Plant name	Local name	Parts used
<i>Andrographis paniculata</i> (Burm.f.)Wall.ex Ness.	Kalmegh	Leaves, Stems
<i>Cocculus hirsutus</i> (L.) Diels	Patal graud	Bark
<i>Nyctanthes arbor-tristis</i> L.	Shiuli	Leaves
<i>Piper longum</i> L.	Pitu	Leaves
<i>Holarrhena pubescens</i> (Buch.-Ham.)wall.ex.G.Don	Kurchi	Root, Stem bark
<i>Shorea robusta</i> L.	Sal	Bark
<i>Hemidesmus indicus</i> (L.)R.Br.	Anantmool	Root
<i>Symplocos racemosa</i> Roxb.	Lodh	Stem bark

Table-3: Some Indigenous fumitories taken by tribal people:-

Name of Fumitories	Local name	Used by tribal people	Plant used	Family	Parts Used
Organic cigarettes	Biri	Santal, Munda, Bhumij, Lodha	<i>Nicotiana tabacum</i> L. <i>Shorea robusta</i> Gaertn.f.	Solanaceae Diptrocarpaceae	Leaf
Marijuana	Ganja	Bhumij, sabar	<i>Cannabis indica</i> Lam.	Cannabaceae	Leaf

Table- 4 :Some Indigenous masticatories taken by tribal people :-

Name of masticatories	Local name	Used by tribal people	Plant used	Family	Parts Used
Jiva	Ananta-mul	Santal, Munda,	<i>Hemidesmus indicus</i> (L.) R.Br.	Asclepiadaceae	Root
Tobacco	Dokta pata	Munda, sabar	<i>Nicotiana tabacum</i> L.	Solanaceae	Leaf

A total of 3 beverage yielding plants belonging to 3 families, 3 plants for fumitories belonging to 3 families and 2 plants for masticatories belonging to 2 families are used by the tribal's living in jangal mahal. The main ingredient to make these beverages is Ranu tablets, locally called "Bakhar". It helps in fermentation of both beverages mahua and haria. The people of my investigated area informed that bakhar is like a tablet which is the mixture of roots, barks, leaves of about 8-10 plant species (Table-2) and binded with the freshly pounded rice flour. These plants are as In general, various studies have shown that different areas in different parts of the world demonstrated the existence of considerable amount of indigenous ethno botanical knowledge.(Bekalo et al.2009, Abbas et al.2016.

5. CONCLUSION:

Based on initial survey and group discussion with ethnic people of the study area, it was found that information about plant used for beverages, fumitories and masticatories is mostly confined to elder people. Younger generation is ignorant about these vast resources available in their surroundings and commercialization of those narcotic plants. The indigenous knowledge system of beverage preparation is still very rich and available among tribal community of this Gram Panchayats under Jhargram district of West Bengal. Hence it is necessary to document the traditional knowledge of useful plants and their commercial uses before being lost forever from the community.

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