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# Ethnobotanical Investigation of the Silisarh Lake Area of the Alwar District of Rajasthan

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## Abstract

Ethnobotany is the branches of the sciences which are concerned with the utilization of the plants by the tribal peoples; tribes are living with the plants from the centuries, so they know the planned and the sustainable utilization of the plants. A number of the work has been done in the ethnobotany of the different part of the world, in this case we have try to work on the one of the area of the Alwar district of Rajasthan, that is complex vegetation area of the silisarh lake area. This area is very fertile and from time to time a number of the vegetation pattern (seasonal succession) can be seen, well we have collected the data of some 50 plants over the entire region which are important form the ethno-pharmacologically point of view. These kinds of the studies promote the conservation of the vegetation or the biodiversity of the area so that biodiversity can be conserved over the area for the planned utilization for the coming generation.

- The eastern Himalayas
- Sunder ban
- Far East area

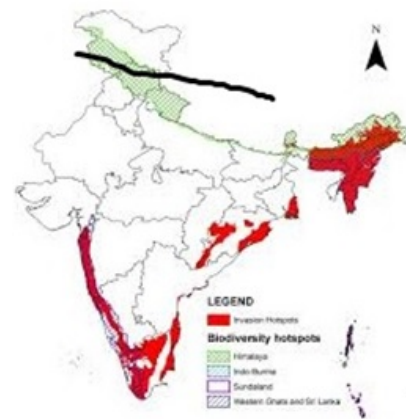


Figure 1: Hot spot of biodiversity in India.

**Keywords:** Ethnobotany; Conservation; Planned utilization; Medicinally important

## Introduction

India is rich sources of the biodiversity; all the states of the India are the rich sources of the biodiversity, from north-south, east to west, and rich sources of the biodiversity can be seen. To protect the biodiversity in India biodiversity board has been constructed, that is the national biodiversity board [1]. National biodiversity board has appointed the national biodiversity policy and law to deal the current and emerging aspects of the biodiversity rules and the issues.

India has the remarkable source of the biodiversity, only after Africa India is the second richest sources of the biodiversity; a number of the hot spot of the biodiversity has been assigned in India.

Hot spot is the region which is concerned with the endemism and the 70% of the vegetation has been lost form the area (Figure 1). These are follows:

- Western Ghats

India has also been divided in the different kind of the bio geographic area; bio-geographic region is the distribution of the species in the particular area, in a particular climate [2]. Environmental studies) (Figure 2).

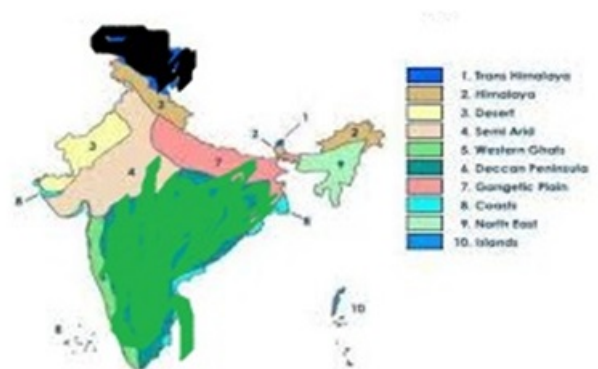


Figure 2: Biogeographic regions of India.

Some of the bio geographic region of the India is enlisted as.

- Trans Himalayan region
- Himalayan zone
- Desert zone
- Semiarid zone
- Western Ghats
- Deccan plateau
- Gangetic plains
- North eastern zone
- Coastal area
- Islands

The biodiversity of the India is threatened by a number of the factors, among them the growing human population and the climate change & anthropogenic factors are the major reasons which are responsible for the degradation of the biodiversity of the India [3].

In India and the other part of the world also the forest and deep oceanic islands and the other regions are the sources of the biodiversity, from the civilization of the human beings these plants and the animals are the richest sources of the all kinds of the needs of the humans (in early domestication of the plants). The plants were utilized as the sources of the food, medicines and the other things. Today 99% of the commercial and economically important plants are the resultant of the domestication of the plants by different means by the different society in the different ages of the development of the human society from 3000BC to today era [4].

In India the all states have the tremendous kind of the biodiversity. In India Rajasthan is the area which is although is in nature arid and semiarid of nature but many of the places in Rajasthan also have the good biodiversity like in the hilly areas of the Mount abu and the other regions of the arawalli hills [5].

In this case we try to elucidate the ethno botanical investigation of the one of the area of the Alwar district of Rajasthan.

Alwar is the city and it is situated in between the Jaipur and the Delhi region. Historically Alwar is famous for the many kinds of the monuments and the forts. The Balkila fort region is famous for the famous king and there emperor ship, the area of the Ajabgrah and the Bhangrah are famous for the Haunted places in India.

A long hillock of the Arawalli hill is the beauty of the Alwar city. The waving hills of the Arawali regions are the rich sources of the many kinds of the vegetation. Although the basic nature of the vegetation is the arid and the semiarid types, however in the rainy seasons the tremendous kinds of the vegetation can be seen. World famous Sariska tiger sanctuary is the reservoirs of the many kinds of the vegetation. A clear stratification can be seen during the whole whether, in this case a long belt of the tree, shrubs and herbs are the point of interest [6-20].

Rupareal River is the beauty of the city, it is the good examples of the lentic ecosystem, some of the aquatic vegetation and the aquatic animals can be seen over there. They are the examples of the rare taxonomic importance. From IUCN

point of view they have been categorized in to the threatened and the endangered species.

In Alwar across whole of the city is crossed by the Arawali hills, the vegetation on the hills during the rainy seasons are of diverse kind. A number of the rare and the medicinally important vegetation can be seen on the Arawali hills [21-26].

In Arawali hills the dominant form *Anogessus pendula* and some other trees are in the dominant form, although stratification of the vegetation area is the can be seen in whole of the weather [26-30].

In that paper we are trying to analyze the Ethnobotanical investigation of the area of the Alwar district of the Rajasthan entitled as the silisrah area [31-40]. This area is very fertile and has a number of the vegetation in composition. There are a number of the tribes are living in the area who are utilizing the plants from the decades for the various purposes.

## Material and Methods

Silisrah area is the 7-8 km area located far from the city. This lake area is located in the north eastern part of the city. This lake is constructed by the Maharajas Vinaysingh in 1845, the purpose of the lake was that during the rainy season whole of the lake was filled by the water and the whole city is supplied by the water from the lake. The area around the Silisrah lake is fertile and rich. It contains a number of the vegetation of the complex Taxonomic entity. The Ethnobotanical investigations are carried out to compare the indigenous knowledge about the uses of the medicinal plants for the treatment of the various kinds of the diseases.

Ethnobotanical investigation was collected from the native inhabitants, of the places, using the semi structures questionnaires, filed work was done for the documentation of the data, plants has been taken and collected, and photographed. However during the questioner the Kyoto protocols of the biodiversity conservation has been taken in to the consideration. The information was asked for the traditional knowledge of the plant part and the methods of their utilizations .Interviews were conducted in the local language [6,41-47].

Well we have visited the area during the 2009 and 2010, a significant change in the vegetation can be seen during the summers and the winters and rainy seasons .In rainy seasons the diversity of the plants are at the peaks (**Figures 3-7**).



**Figure 3:** Map of Rajasthan showing different places.



**Figure 6:** The extended lake area showing the vegetation both of sides.



**Figure 4:** Silisarh lake area of the Alwar district of Rajasthan.



**Figure 7:** Consortium of the vegetation of the lake area.



**Figure 5:** Silisarh lake area.

## Results and Discussion

A total of the 45 men, 40 women's are interviewed for the utilization of the medicinal plants for the ethno botanical purposes [21-29,48]. The information was divided in to different groups (**Table 1**).

- 31-40 years
- 45-60 years
- 60 -70 years

**Table 1** Enlistment of the various plants of the silisarh lake regions for the Ethnobotanical purposes.

S.no.	Taxon	Life forms	Plant part used	Family	Way of utilization	Purposes
1	<i>Achyranthes aspera</i>	Herbs	Roots, stem, leaves & fruit	Amaranthaceae	Powdered form	High fever and cold
2	<i>Achyranthes argentea</i>	Herbs	Roots, stem, leaves & fruit	Amaranthaceae	Power form	Cold and in asthma
3	<i>Aconitum</i> spp	Herbs	Roots & leaves	Ranunculaceae	Roots	Joint pain, high fever
4	<i>Acorum</i> spp	Herbs	Roots & leaves		Paste and powder	Digestive disorders
5	<i>Amaranthus</i> spp	Herbs	Leaves & roots	Amaranthaceae	Powder form	For eating purposes
6	<i>Atropa</i> spp	Herbs	Leaves & roots	Soalnameae	Powder form	For respiratory purposes
7	<i>Berberis</i> spp	shrubs	Leaves & roots	Berberidaceae	Power, paste form	For respiratory purposes
8	<i>Calotropis procera</i>	Shrubs	Leaves, roots & fruits	Asclepiadiaceae	Power and in rough form	For different kinds of the bacterial infections
9	<i>Fragaria</i>	Herbs	Leaves & roots			Skin infections
10	<i>Justicia adhotoda</i>	Shrubs	Roots, leaves & stem	Acanthaceae	Powder and in rough form	Respiratory and skin infections
11	<i>Melia azadiratica</i>	Shrubs	Fruits		Pulp	Skin disorders
12	<i>Ricinus communis</i>	Tree	Leaves, roots & fruits	Euphorbiaceae	Power and in rough form	Nervous disorders, respiratory disorders
13	<i>Verbascum</i> spp	Herb	Leaves & stem	Compositae	In powder form and rough form	For eating purposes
14	<i>Viola</i> spp	Herb	Leaves			For eating the leaves
15	<i>Withania somnifera</i>	Herb	Leaves & roots	Solanaceae	In rough and powder form	For respiratory purposes,
16	<i>Zizyphus jujube</i>	Shrubs	Roots & leaves	Rhanmanaceae	Leaves	As a forage
17	<i>Abutilon indicum</i>	Shrubs	Leaves & roots	Malvaceae	Leaves, fruit	Alimnets disorders
18	<i>Abutilon asiaticum</i>	Shrubs	Leaves & roots	Malvaceae	Leaves	For digesting disorders
19	<i>Acacia arabica</i>	Tree	Leaves, roots, stem & fruits	Mimosaceae	In different form	For various purposes
20	<i>Acacia catechu</i>	Tree	All parts of the plants	Mimosaceae	In different form	For many purposes
21	<i>Achalypha indiaca</i>	Herbs	Leaves	Euphorbiaceae	In powder form	As a forage and for digestive disorders.
22	<i>Acalypha paniculata</i>	Herbs	Leaves	Euphorbiaceae	In paste form,	Antibacterial activities
23	<i>Acanthospermm</i>	Herbs	Leaves, fruit & stem	Acanthaceae	Powder and paste form	Antibacterial form
24	<i>Ageratum conjooides</i>	Herbs	Leaves, fruit & roots	Compositae	Powder form ,in paste form	In intestine problem
25	<i>Acanthus licofoia</i>	Herbs	Leaves & roots	Acanthaceae	Different form	For eating purposes
26	<i>Achillea millifolium</i>	Herbs	Whole parts	Asteraceae	Powder form	For various purposes

## Conclusion

This study is based on the plant based medicines or the utilization of their plants for the various kinds of the purposes. The present paper summarizes the data on the 26 plants. The majority of the plants are utilized for the purposes of the

treatments of the bacterial infection caused by the different kinds of the bacteria during the rainy seasons.

These kinds of the studies are very useful for the conservation of the flora of any regions. Since the communities are living in the area from the long time and they are familiar with the utilization of the plants of any regions. These days the tribal regions and the tribal area are disappearing with the great

speed so that the knowledge with them also disappearing, so it is very urgent needs to conserve the plants of these area for the betterment of the society and the regions (Biodiversity conservation).

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