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ETHNO-MEDICINAL DIVERSITY OF CHURU DISTRICT TRADITIONALLY USED BY RURAL PEOPLE

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ABSTRACT

Plants are an integral part of nature and the nature reflects the creativity of God. The plants are designed with a specific purpose. They are the life sustaining force on the earth. In Churu District percentage of the population still prefers to use herbal medicines along with modern medicines. The region is mostly inhabited by rural and native communities. Tribal cultures hold much ethnobotanical information, and rural and native communities regularly use medicinal plants for treatment of diseases, wounds, fractures and other ailments. In the present study it was found that total 56 plant species were used by the rural people for their various ailments. Medicinal values of these plants are largely based on folk practitioners. The study stated that either the whole plant or different parts like leaves, stem, bark, roots, etc. are used.

Key Words: *Churu, Ethnobotanical, Folk practitioners, Ailments*

INTRODUCTION

It is believed that about 15-17 million species are present on the earth planet. Out of which only 5 million have been described so far. Interestingly, 70% of them occur in tropical and sub tropical parts of the world (Krishnankutty and Chandrasekaran, 2007). In India, more than 43% of the total flowering plants are reported to be of medicinal importance (Pushpangadan, 1995). Utilization of plants for medicinal purposes in India has been documented long back in ancient literature. However, organized studies in this direction were initiated in 1956. Right from its beginning, the documentation of traditional knowledge especially on the medicinal uses of plants, has provided many important drugs of the modern day (Anon, 1994).

The tribal knowledge regarding the use of plant species for various purposes depend on the surrounding plants (Reddy *et al.*, 2010). Plants and other living organism have great potential to treat human diseases (Subbu and Prabha, 2009). Ethnobiology came in to being when the earliest man observed the animals mostly the apes and monkeys eating certain plants and found heal his wounds and get rid from pain and suffering. An analysis of such observations provoked them to use of plants for maintenance of life and alleviation of diseases (Sinha, 1999). Despite of new advances in medicine, the cultural use of plant in traditional medicine continues from primeval time to this day all over the world. World Health Organization has estimated that 80% of the people in the world rely on traditional medicines for primary health care needs (Fransworth, 1990). It was also realized that till now only 5% of the herbal wealth was studied whereas the rest remained unexplored (Arya *et al.*, 2008). Medicinal plants are gaining popularity because of several perceived advantages, such as fewer side effects and better patient compliances (Brown *et al.*, 2008). Today the medicinal world is posed with complex challenges. Thus time demand an integrated and pluralistic approach towards health care to cope effectively with his situation (Sen and Batra, 2008). Establishment of herbal forms in well selected localities will exercise scientific control over the cultivation of medicinal herbs (Kritikar and Basu, 1987). In every ethnic group there exists a traditional health care system, which prevalent and popular among community (Rai, 2007). The conservation and protection of medicinal plants against over exploitation by domestic and foreign commercial interest without benefits accruing to the nation are clearly our priorities (Natesh and Mohan Ram, 1999).

The traditional healers of Shekhawati region of Rajasthan having a commendable knowledge of the medicinal values of plant that grow around them (Katewa and Galav, 2005). In the various regions of Churu, different plant species are the major source of local medicine for their ailments. Information

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on folk medicinal uses of the plants has recently become of renewed interest in search for new therapeutic agent. Vast knowledge on medicinal plants exists as oral among the folklore and primitive societies of India, where a large number of potent medicinal herbs are found growing wild. Although, a great amount of ethnobotanical research work has been undertaken in various pockets of tribal and rural population scattered throughout the country, there is still much to be discovered. Ethnobotanical explorations play vital role in bringing to light information about such plant species from our rich flora that can be source of safer and cheaper potent drugs for the benefit of mankind. In country like India, according to reasonable estimates, 70 percent inhabitants still rely on herbs (Singh, 1997).

MATERIALS AND METHODS

Study Area

Churu is the one of district of Shekhwati region of Rajasthan. Churu district is situated in the middle portion of the North-East of Rajasthan between $27^{\circ}24'$ N to $29^{\circ}00'$ N latitude and $73^{\circ}51'$ E to $75^{\circ}41'$ E longitude, occupying an area of about 13,858 km² (Fig.1). The district is a part of the Thar Desert in India, situated 400m above the sea level. The district is well known for huge diurnal and seasonal temperature variations from -2° C in winters to 49.8° C in summers with shifting sand dunes, erratic and scanty rainfall, and high wind velocity, having thorny and poor vegetation. The sandy soil and bright sunlight are the two important natural resources abundantly available in this region which are responsible for the development of the desert vegetation having variable medicinal properties. Generally the folk people are well acquainted with these medicinal properties (Jain, 1991; Kaushik and Dhiman, 2000).

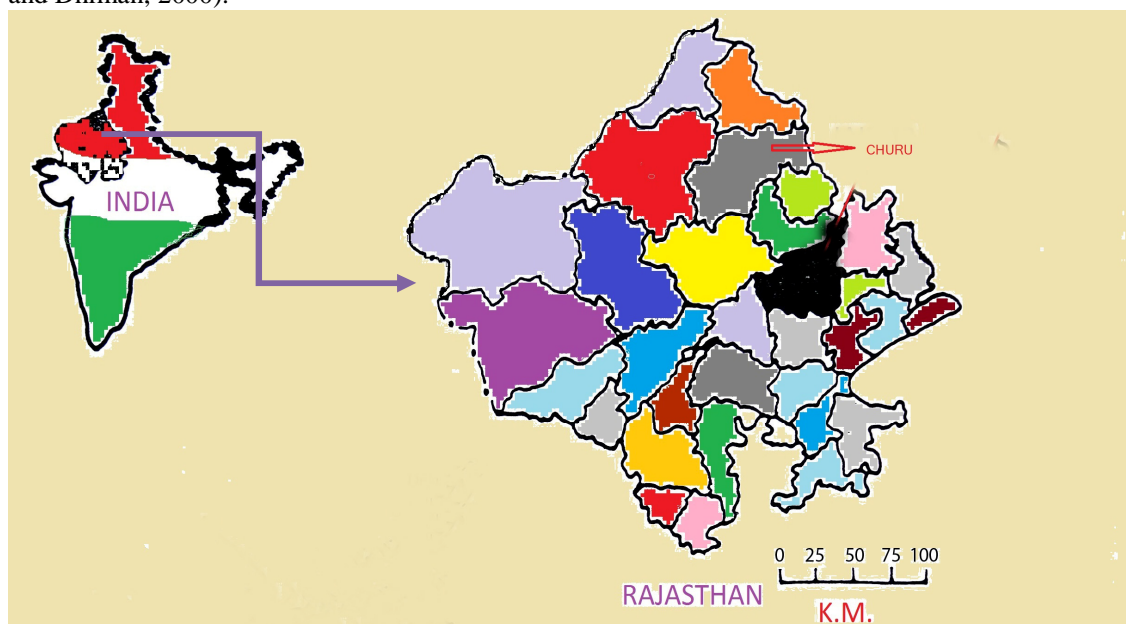


Figure 1: Location of Study Area (Churu)

Methods

For the documentation of ethno-medicinal diversity, two methods were used. The first one was by meetings, contacting, discussion and interviews with villagers, folk healers, vaid, hakims, saints, homeopath and other practitioners in the vicinity of NWS. Second one was by consulting the literatures on traditional medicine. In order to document the utilization of indigenous medicinal plants, survey was carried out in the remote areas of Churu district in the Shekhwati region of Rajasthan. The survey was spread across the seasons so as to get maximum information. During the visits, daily activities were closely observed and interpersonal contacts were established by participating in several social and religious ceremonies. Data were also collected through questionnaire in their local language. The collected specimens were identified taxonomically with the help of the Flora of India (Sharma and Balakrishnan, 1996), Flora of Indian Desert (Bhandari, 1990), Flora of North East

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Rajasthan (Sharma and Tiagi, 1979), Flora of Upper Gangetic Plain and the Adjacent Siwalic and Sub Himalaya Tract (Duthie, 1903-1929) and Flowers of Himalaya (Polunin and Stainton, 1984). The verification and authentication of collected data were made in the light of standard literature (Jain, 1963, 1991; Nadkarni, 1992; Kritkar and Basu, 1987; Chopra, 1982).

ENUMERATIONS

Table 1: Medicinal plants of Churu and their uses

S.N	Name of Plant	Family	Local Name	Part(s) used	Uses
1.	<i>Acacia nilotica</i>	Feabaceae	Babul	Bark, latex	Cholera, on burn
2.	<i>Acacia senegal</i>	Feabaceae	Khumbhata	Gum	On burn, other inflamed area
3.	<i>Acalypha indica</i>	Euphorbiaceae	Khokali	Whole plant	Bronchitis, pneumonia, ulcers
4.	<i>Achyranthus aspera</i>	Amaranthaceae	Chirchita/Latjira	Whole plant	Diuretic, astringent
5.	<i>Aerva tomentosa</i>	Amaranthaceae	Gorkhabundi	Whole plant	Decoction for swelling
6.	<i>Aloe barbadensis</i>	Liliaceae	Ghikumari/Ghik anwar	Fresh leaves, Leaf juice	Swellings, dropsy, Constipation
7.	<i>Amaranthus spinosus</i>	Amaranthaceae	Choulai	Leaves, roots	Laxative, abortifacient
8.	<i>Aristolochia bracteolata</i>	Aristolochiaceae	Kiramar	Leaves	Eczema
9.	<i>Artemisia scoparia</i>	Asteraceae	Bana,	Whole plant	Burns
10.	<i>Azadirachta indica</i>	Meliaceae	Neem	Twigs, leaves	Boils, abscesses, adenitis, eczema, ulcers. Intestinal
11.	<i>Calotropis procera</i>	Asclepidaceae	Aak	Roots, flowers	Malarial fever
12.	<i>Capparis decidua</i>	Capparidaceae	Kair	Whole plant	Rheumatism, toothache, cardiac complaints
13.	<i>Carissa congesta</i>	Apocynaceae	Karaunda	Roots	Rheumatism
14.	<i>Chenopodium album</i>	Chenopodiaceae	Bathua	Seeds	Skin diseases
15.	<i>Citrullus colocynthis</i>	Cucurbitaceae	Gartoomba/Tumba	Roots, fruits	Jaundice, purgative
16.	<i>Cleome gynandra</i>	Capparidaceae	Hulhu	Leaves, seeds	Typhus fever
17.	<i>Cucumis melo</i>	Cucurbitaceae	Kachri	Fruits	Digestive, increase immunity
18.	<i>Curculigo orchiodis</i>	Amaryllidaceae	Kalimusli	Roots	Asthma, jaundice, diarrhea and colic
19.	<i>Cuscuta reflexa</i>	Convolvulaceae	Amar-bel	Whole plant	Swelling, headache, jaundice
20.	<i>Cynodon dactylon</i>	Poaceae	Dubghas	Whole plant, roots	Piles, Chronic gleet
21.	<i>Cyperus triceps</i>	Cyperaceae	Nirbasi	Roots	Liver stimulation, decoction for fever
22.	<i>Dalbergia sisoo</i>	Feabaceae	(Shisham)	Leaves, bark	Inflamed mammary glands
23.	<i>Datura stramonium</i>	Solanaceae	Dhatura	Whole plant	Asthma, in ophthalmology
24.	<i>Desmostachya bipinnata</i>	Poaceae	Dab/Kusha	Roots	Dysentery, Leucorrhoea

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25.	<i>Eclipta alba</i>	Asteraceae	Bhringraz	Whole plant	Hair tonic, enlarge liver and spleen, skin diseases
26.	<i>Emblica officinalis</i>	Euphorbiaceae	Anwla	Bark, leaves, fruits	Sores, pimples, refrigerant, diuretic, laxative
27.	<i>Enicostema hyssopitolium</i>	Gentianaceae	Chota Chirayata	Whole plant	Diabetes
28.	<i>Euphorbia hirta</i>	Euphorbiaceae	Laldhuni	Whole plant	Worms, asthma, vomiting, ulcers
29.	<i>Evolvulus alsinoides</i>	Convolvulaceae	Shankhpusi	Whole plant	Febrifuge, enhance memory, asthma
30.	<i>Ficus benghalensis</i>	Moraceae	Bargad	Tender ends of the aerial roots, latex fruits, leaves, bark	Obstinate vomiting, Piles, Boils and blisters
31.	<i>Ficus religiosa</i>	Moraceae	Pipal	Leaves, fruits	Inflammatory ulcers.
32.	<i>Jatropha curcas</i>	Euphorbiaceae	Ratanjot	bark, seeds, Leaves	Prevent conception forever
33.	<i>Lagenaria siceraria</i>	Cucurbitaceae	(Kashiphal)	Leaves, seeds, roots	Dysentery, colic, To promote lactation
34.	<i>Lantana camara</i>	Verbinaceae	Gendi	Leaves	Jaundice
35.	<i>Lawsonia intermis</i>	Lytharaceae	Mehndi	Leaves	Rheumatism
36.	<i>Leptadenia pyrotechnica</i>	Asclepidaceae	Khimp	Whole plant	Spermatorrhoea, Yellow fever
37.	<i>Leucas aspera</i>	Lamiaceae	Paniharin	Leaves, flowers	Wound healing
38.	<i>Luffa acutangula</i>	Cucurbitaceae	Torai	Leaves, seeds	Jaundice, fevers, ulcers, intestinal
39.	<i>Momordica balsamina</i>	Cucurbitaceae	Karela	Fruits	Splenitis, leprosy
40.	<i>Nerium indicum</i>	Apocynaceae	Kaner	Bark, leaves, flower	Cathartic, diabetes
41.	<i>Opuntia ficus-indica</i>	Cacataceae	(Nagphani)	Fruits, leaves	Cardio tonic, diuretic
42.	<i>Pedaliium murex</i>	Pedaliaceae	Bada gokhru	Fruits, leaves	Asthma and whooping cough
43.	<i>Peganum harmala</i>	Zygophyllaceae	Harmal	Seeds	Gonorrhoea, dysuria, Renal calculi
44.	<i>Phyllanthus niruri</i>	Euphorbiaceae	Bhui-anwla	Whole plant	Asthma, colic, jaundice
45.	<i>Prosopis cineraria</i>	Feabaceae	Khejri/janti	Inflorescence, flowers	Urino-genital disease, gonorrhoea, dropsy
46.	<i>Ricinus communis</i>	Euphorbiaceae	Erand	Leaves, seeds, carbuncle	Rheumatism, miscarriage, fruits in pregnancy
47.	<i>Salvadora persica</i>	Salvadoraceae	Jhal/ Chotapilu	Roots, bark	Rheumatism
48.	<i>Solanum indicum</i>	Solanaceae	Baigan Kateli	Seeds	Asthma, gonorrhoea, gastric problems
49.	<i>Solanum nigrum</i>	Solanaceae	Makoy	Whole plant	Toothache, dysuria
50.	<i>Tecomella undulata</i>	Bignoniaceae	Rohida	Bark	Dysentery, fever, narcotic
51.	<i>Tephrosia hamiltonii</i>	Feabaceae	Sarphonka	Root, stem	Syphilis and leucorrhoea
52.	<i>Tinospora cardifolia</i>	Menispermaceae	Neem giloy	Whole plant, stem	Headache
53.	<i>Tribulus terrestris</i>	Zygophyllaceae	Chota gokhru/ Bhankari	Roots, leaves, fruits	Jaundice and fever
					Stomachache, tonic, urinary complaints

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54.	<i>Withania somnifera</i>	Solanaceae	Ashawgandha	Roots, leaves	Sexual weakness, cough, dropsy, diuretic
55.	<i>Ziziphus mauritiana</i>	Rhamnaceae	Ber/ bordi	Whole plant	Pain, wound healing
56.	<i>Ziziphus nummularia</i>	Rhamnaceae	Jhadi-ber	Leaves, fruits	Biliousness, astringent, cooling

RESULTS AND DISCUSSION

In India, whereas all other systems of traditional medicine flourished well and received encouragement from both people and government, their very originator 'folklore medicine' which gave birth to traditional medicine remained largely neglected and was left to die a natural death. There has been no movement on the part of Government of India for investing public or private funds for ensuring long term availability of large number of medicinal plants that have been traditionally used by the numerous traditional folk healers (Sinha, 1999).

In the present study, 56 species of ethnomedicinal plants were recorded belonging to 28 families used by the rural people of Churu district of Shekhawati for various ailments. These medicinal plants were used as simple drugs and the drug remedies are used in the form of juice, powder, decoction or paste. The mixture of different plant parts were also used for preparing medicines. Rural people were using these to cure diseases like fever, cold & cough, skin diseases, dysentery, pain, diarrhoea, wounds, snake bite, insect bite, asthma, burn and other various disorders.

The issue of medicinal plants conservation has been focused in the last 15 years and various conservation methods (*in situ*, botanical gardens, germplasm banks, etc.) were mentioned by many researchers (Jain and Defillips, 1991). The rapid degradation of forest has resulted in depletion of natural resources on which these people depend and it has become difficult for them to lead their traditional way of life. This situation has been forcing them to discard their traditional way of life and adopt the urbanized practices. To avoid this, the government should take severe action to protect the forest and its wealth and need for developing a code of practices for growing, harvesting, collecting, handling, packaging, storing and exporting these plant materials. Many ethno-medicinal plants are at the verge of extinction due to over-exploitation. Therefore, conservation of these plants should be viewed seriously and there is urgent need to embark on large scale cultivation of these ethnomedicinal plants of high socio-economic value through creation of herbal gardens in Rajasthan and also in other part of India.

The survey indicates that Churu region is rich in medicinal plants and covers a wide spectrum of human ailments. Some plants are of common use for different kind of ailments. This region has important areas of plant wealth for healthcare in Rajasthan. The plants are not only valued as herbal drugs but also utilised for food, fodder, gums and resins, essential oil, dye, fatty oil, condiments, spices, etc. there are urgent need conserve these medicinal and economical important plants.

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