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RESEARCH ARTICLE

TRADITIONAL USES OF SOME MEDICINAL PLANTS USED IN DISTRICT SRIGANGANAGAR OF RAJASTHAN FOR THE TREATMENT OF VARIOUS HEALTH PROBLEMS

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Abstract

Traditional knowledge about the vegetation of very particular area is very helpful to the people of that area to meet their daily life requirements. The use of local plant for primary health care has been considered as old practice but the rural people of study area still depends up on use of local plants for the treatment of various health problems. This paper revealed the use of 20 medicinal plants for the treatment of various health problems

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INTRODUCTION

Ethnobotany can be defined as the total natural and traditional relationship and interactions between man and his surroundings local environment. In order to assess the consumption the traditionally important and indigenous medicinal plants survey was carried out in the different region of study area. These medicinal plants were used by the local people of this region. The ethno botanical information were gathered through several visits, questionnaire, group discussions with local peoples and Vaidyas and Hakims identified to cure various diseases. The local people of the area use the maximum number of plant species for medicinal purpose. The medicinal value of these medicinal plants includes the treatment of many common diseases and other health problem. This prompted the need to take up medicinal studies in this studies area. The study yielded valuable information on traditional medicinal knowledge system of peoples and medicinal plants having therapeutic values. This paper provides information on medicinal plants used in the treatment of various health disorders. This paper also discusses the household remedies practiced by the local people of this zone. A lot of work has been done on medicinal plants of India but a little information is available on plants used for the treatment of various health problems in District Sriganganagar of Rajasthan.

REVIEW OF LITERATURE

Ethno-botany is totally in virtually a new field of research, If this field is investigated thoroughly and systematically, it will yield result of great value to the ethno-botanist, linguistics, anthropologist, botanists and phytochemists. After the time of Hershberger (1895) to the present date, several authors have tried to give a description of subject ethno botany and its scope, methodology, its various disciplines sub-disciplines and potential etc.

Schutles (1960) had written on tapping our heritage of ethno botanical lore. He had suggested three methods of ethno-botanical research namely through literature through chemical investigation and through field study of ethno botany among the primitive peoples. He also gave some examples of plant used during ancient period a historical

account. Schutles (1962) outlined the role of ethno-botanist in the search of new medicinal plants. So, this was a paper on the subject of ethno-botany on a specialized line is medicinal plants. Archeological plant remains note on plant collections and herbaria, literature, survey, field studies among the aboriginal societies are amongst the procedure by which he suggests that new medicinal plants can be discovered. Jain (1964) wrote on the role of botanist in folklore research. He writes that folklore involve the study of all aspect of the intellectual and material culture of indigenous or backward people, plants and their proud possession and knowledge of their properties resulting from the close association give rise to the rich plant folklore. Jain (1965 c) outlined the prospect by some new or less known medicinal plant resources. Jain (1986) gave an over-view of the subject ethno botany an indication of the significant research during the last thirty years in this field and also showed how ethno botany is an inter disciplinary science. Kapur S.K (1996) described about the traditionally importance medicinal plants of Bhaderwah hills. Katewa and Choudhary (2000) have published a paper on ethno-veterinary survey of plants of Rajasmand district of Rajasthan.. Jain etal (2009) described about the ethno-botanical survey of Sariska and Siliserh regions in Alwar district of Rajasthan. Sharma and Kumar (2011) described about the ethnobotanical studies on medicinal plants of Rajasthan (India): A Review.

STUDY AREA

Sriganganagar is the northern most district of the Rajasthan. The district having an area of 10,999 sq km is situated in the north of Rajasthan state between $28^{\circ}49' - 30^{\circ}6'$ North latitude and $72^{\circ}36' - 74^{\circ}16'$ East longitude. This district constitutes a part of the great Indian desert with the district Bhawalangar of west Pakistan in its North-West and district of Ferojpur of Punjab and Hisar of Harayana on its North-East and Hanumangarh of Rajasthan on its East. To its South lies the desert district of Churu and Bikaner. Sriganganagar district is considered as irrigated-desert and is dominated by agriculture and agriculture based industries

METHODOLOGY.

The rural people of this district mainly depend upon local medicinal plants in day-to-day life keeping this objective in mind. Intensive ethno-botanical exploration were undertaken in the selected places of Bikaner district of Rajasthan to find out the various medicinal plants either in flowering or fruiting stage. The freshly collected samples of plants were arranged properly within the folded sheets of processing paper ($12''/18''$), each of which was places between two dry blotters of same size. The whole piles of blotters and pressing sheet was them locked up in a field press for 24 hours. Since drying of plants was done without heat, it needed five changes blotters and pressing sheets properly spread over a span of 10 days. Each specimen was mounted on a white gum paste. To know the uses of plants, different categories of people like of family heads, headers, old experienced and knowledge informants were repeatedly interviewed specific questions designed by Jain and Goel, 1995 were asked and the resultant information was recorded in the ethno-botanical field work along with important medicinal uses. The 20 medicinal plants were reported here which are used for the treatment of various disorders. The method, which are used to collect the data:

- 1) Plants were collected and preserved.
- 2) The information was collected from the elderly persons of the area.

Observations.

Ethno botanical study carried out in this region throws light on 20 medicinal plants as shown in the table

RESULTS AND DISCUSSION

Many plants that are used by the local people of the study area find mention in the ancient medicinal literature and used by different systems medicines such as the Ayurveda, Sidha and Unani systems. The recorded ethnomedicinal plants werw used in the treatment of various health disorders such as: Diaebetes, fever, stomachae, arthritis, toothacheae and skin problems etc. Herbal remedies were taken externally in the form of paste or taken orally. In sme cases massage also was prescribed. The medicinal plants are uaslly are usually collected from wild habitat, when there is need. The information provided in the paper is limited and there is a scope to initiate further ethnobotanical study among the communities to gather information as far as possible. There is an urgent need to explore and document the ethnomedicinal plants used by the communities of study area before such valuable knowledge becomes inaccessible.

Table: A list of medicinal plants used for various diseases along with part/parts used

Sr. No	Scientific Name	Family Name	Local Name	Plant Part(S) used	Preparation and mode of use (s)
1.	Acacia nilotica (L) Willd. Ex.Delile..	Fabaceae/Mimosaceae	Kikar/Babool	Young twigs Stem bark Powder of stem Inner bark	<ul style="list-style-type: none"> • Young twigs are used as toothbrush and cleaning the tongue the flexible fibre help cleaning and strengthening the teeth. . • The powder of stem bark is given orally in asthma. • Paste of inner bark also applied externally on honey bee sting and wasp sting or any insect bite.
2.	Albizia lebbek Benth.	Leguminoseae/ Mimosaceae	Siris,Sirinh.	Bark Root bark Leaves	<ul style="list-style-type: none"> • Bark is used as a remedy for bronchitis and leprosy • Root bark is especially useful for Gum & teeth. It strengthens the Gums. • Leaves are useful in curing night blindness.
3.	Aloe barbedensis Miller.	Liliaceae	Ghigya,Gwar pattha.	Leaves	<ul style="list-style-type: none"> • Juice of leaves used in liver and spleen ailments& for eye trouble. • Thickened Juice of the leaves is used stomach and spleen. • Juice of leaves is applied to painful inflammations of the body.
4.	Argemone mexicana L.	Papaveraceae	Satyanashi untkantalia	Whole plant	<ul style="list-style-type: none"> • Juice of the plant is used for dropsy, jaundice and cutaneous affections, when rubbed on effected parts it relieves rheumatic plain.
5.	Azadirachta Indica A. Juss.	Meliaceae	Neem,Neemro	Leaves	<ul style="list-style-type: none"> • The wound or cuts are washed with the water boiled with leaves.
6.	Boerhavia diffusa Linn.	Nyctaginaceae	Santa	Root	<ul style="list-style-type: none"> • The roots crushed & boiled are considered to be useful in night blindness. • These are useful in asthma, Stomachache, anemia, jaundice, intestinal abnormality and fever.
7.	Calotropis procera (Aiton.)W.T. Aiton	Asclepiadaceae	Akdo	Leaves	<ul style="list-style-type: none"> • Fresh leaves slightly roasted and pounded are bandaged to painful rheumatic joints, swelling and headache.

					<ul style="list-style-type: none"> Roasted leaves are applied on rheumatism.
8.	<i>Capparis decidua</i> (Forssk.) Edgew.	Capparaceae	KER/ Kerya	Fruits Twigs Root Bark	<ul style="list-style-type: none"> Unripe fruits are not only pickled locally, but also commercially. They are also cooked as a vegetable with the fruits of <i>Prosopis cineraria</i> (Sangari), Kumtha, Kachri, Kheemp&Kair “Panchkutta” The tender twigs strengthen gums and relieve toothache when chewed. They are also used as toothbrush. The root bark with hot water is taken orally by the rural people of district to cure cough and asthma. The roots are also given for the treatment of intermittent fever, inflammation and rheumatism by the rural people.
9.	<i>Chenopodium album</i> Linn.	Chenopodiaceae	Bethuo, Chilaro	Whole Plant	<ul style="list-style-type: none"> Leaves and tender twigs are consumed as vegetable in kidney stone problem.
10.	<i>Coriandrum sativum</i> Linn.	Apiaceae	Dhania	Fruit	<ul style="list-style-type: none"> Decoction of fruits Dhania <i>Cuminum cyminum</i> (Jeera) <i>Foeniculum vulgare</i>(Saunf), <i>Trachyspermum ammi</i> (ajwayan) of all four in equal proportions mixed with crystalline sugar given to children in stomach pain.
11.	<i>Crotalaria burhia</i> Buch-Ham. ex Benth	Fabaceae	Kharsana/ Zunda	Root	<ul style="list-style-type: none"> The root juice with sugar is given to cure kidney pain by the people of Bikaner district.
12.	<i>Cyperus rotundus</i> Linn.	Cyperaceae	Motha	Tuber	<ul style="list-style-type: none"> Tuber is useful in disorders of the stomach and irritation of the bowels.
13.	<i>Datura metel</i> Linn.	Solanaceae	Dhatura	Seed	<ul style="list-style-type: none"> Seeds are used in fever and skin diseases. These are also used in asthma, hydrophobia and malaria

					fever.
14.	<i>Emblica officinalis</i> Gaertn	Euphorbiaceae	Amala	Fruit	<ul style="list-style-type: none"> Paste made from fruits of this tree and seeds of groundnut (<i>Arachis hypogaea</i>) along with lemon Juice and petals of rose make a good lotion for problems of dry skin.
15.	<i>Euphorbia hirta</i> Linn.	Euphorbiaceae	Dudhli	Latex	<ul style="list-style-type: none"> Latex of plant is used in warts and skin diseases like leucodermal spots. Paste of root is mixed with honey and given to nursing mother to start of increase milk. Decoction of leaves is employed in asthma, cough, bronchitis, eczema, colic and spermatorrhoea.
				Root	
				Leaves	
16.	<i>Ficus benghalensis</i> L.	Moraceae	Bad/ Barigad	Fruits	<ul style="list-style-type: none"> Fruits are eaten by peoples for seminal weakness, sexual debility, and spermatorrhoea and sex tonic. Latex used in rheumatism, lumbago and cracked fact. Infusion of stem bark is considered useful in diabetes. The tender adventitious root crushed with water and given internally on fracture of the bones and bandaged on which part fractured.
				Latex	
				Stem bark	
17.	<i>Justicia adhatoda</i> Linn..	Acanthaceae	Adulasa	Leaves	<ul style="list-style-type: none"> Fresh leaf infusion with honey and common salt given for bronchial diseases. Leaf juice as nasal drops for bleeding from nose in summer.
18.	<i>Lawsonia inermis</i> L.	Lythraceae	Mehandi	Leaf	<ul style="list-style-type: none"> Wound healing, hemorrhages fungi. Crushed leaves with 'Kamila' applied to boils useful for skin diseases. Paste of leaves with alum, apply on sore thumbs and leave overnight on pimples.
19.	<i>Mentha arvensis</i> L.	Lamiaceae	Pudina	Branch	<ul style="list-style-type: none"> Paste of branch useful in flatulence, acidity, neutralization. Leaf decoction useful in Diarrhea and Dysentery.
				Leaf	

				Whole plant Leaves	<ul style="list-style-type: none"> Juice of plant given is given to women just before intercourse. 5g. leaves paste mixed with misri (candy sugar) and given once daily for 4 days after menses Repeat after every menstrual cycle.
20.	<i>Moringa oleifera</i> Lam.	Moringaceae	Sainjna	Root & Stem bark Leaves	<ul style="list-style-type: none"> The fresh roots and stem bark are crushed with little water and the paste is applied to the joints for relief in swelling, tumor, and in rheumatic pain by peoples of this district. People given also the extract of fresh leaves with goat milk and sugar in acute dyspepsia and without milk in acute diarrhea.
21.	<i>Nicotiana tabacum</i> Linn.	Solanaceae	Tamakhu	Leaves	<ul style="list-style-type: none"> Dried leaves powder and water of 'Hooka' applied on scab to kill the lice and dandruff.
22.	<i>Ocimum americanum</i>	Lamiaceae	Bapji, Kalitulsi	Leaves	<ul style="list-style-type: none"> Leaves are made into a paste and used in parasitical skin diseases. Seeds decoction drunk twice daily for treatment of dysentery. Flowers are used as remedy for cold and cough.
23.	<i>Ricinus communis</i> L.	Euphorbiaceae	Arand	Leaves Seed	<ul style="list-style-type: none"> Leaves smeared with oil, warmed and tied to injuries organs. Leaves ash with honey useful in cough and cold. Leaves paste for massaging the body in swelling. Pulp of one unshelled seed given to woman just before intercourse.
24.	<i>Solanum nigrum</i> Linn.	Solanaceae	Chirpoti, Makoi	Fruit	<ul style="list-style-type: none"> Fruits are useful in fever, diarrhea, eye diseases and hydrophobia. Leaves are used for enlargement of liver in children.
25.	<i>Tamarindus indica</i> L.	Fabaceae	Emli	Leaves	<ul style="list-style-type: none"> Put leaves into a bucket of water and boil, cool and take bath for relief in body ache and headache. Take a small quantity of fruit pulp add equal quantity of table salt and boil in water, cool and apply the paste on

					the injury twice a day for 3 days.
26.	<i>Tephrosia purpurea</i> (L.) Pers.	Fabaceae	Dhamasia	Leaves Roots	<ul style="list-style-type: none"> Leaves are useful in leprosy. Roots are bitter, useful in dyspepsia and chronic diarrhea, enlarged liver and stomach troubles.
28.	<i>Triognella Foenum- graecum</i> L.	Fabaceae	Methi	Seed	<ul style="list-style-type: none"> seed powder is taken in empty stomach in early in the morning for treatment of diabetes. One tea spoon of powdered fried seeds, mixed with honey and taken twice or thrice a day cures diarrhea and dysentery.
29.	<i>Withania somnifera</i> Dunal.	Solanaceae	Ashwagandha	Leaves	<ul style="list-style-type: none"> Leaves are useful as a febrifuge and applied to lesions, painful swellings and some eye troubles.
30.	<i>Zizyphus nummularia</i> (Burm. F.)	Rhamnaceae	Ber, Bordi, Jaarber	Root Leaves Fruits	<ul style="list-style-type: none"> Powdered root bark used as brain tonic Crushed leaves are useful for curing abscesses. Fruits are cooling and useful in bilious affections.

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REFERENCES

1. Arora, R.K. (1987), Ethno botany and its role in domestication and conservation of native plant genetic resources. In: Jain S.K. (ed.): A Manual of Ethnobotany Scientific Publishers, Jodhpur PP 94-102
2. Brij Lal, Vats S.K., Singh R.D. and Gupta A.K. (1996), Plants used as ethno medicine and supplement fund by the Gaddis of Himachal Pradesh, India, in : Jain S.K. (ed.) Ethno biology in Human Welfare, New Delhi.
3. Brij Lal & K.N. Singh (2008), Indigenous herbal remedies used to cure skin disorders by the natives of Lahaul-Spiti in Himachal Pradesh, Indian Journal of Traditional Knowledge. Vol. 7(2) : 237-241.
4. Chauhan, N.S. (1999), Medicinal and aromatic plants of Himachal Pradesh, (Indus Publishing Company, New Delhi).
5. Hershberger, J.W. (1896), The purpose of ethno botany. Bot. Gaz., 21: 146-158.
6. Jain, S.K. (1964), The role of a botanist in folklore research. Folklore April, 1964.
7. Jain, S.K. (1965c), On the prospectus of some new or less known medicinal plant resources. Indian Medical Journal December: 67-79.
8. Jain, S.K. (1976b), Ethnobotany its scope and study. Indian Mus. Bull, 2:39-43.
9. Jain, S.K. (1986), Ethnobotany. Interdisciplinary Science Reviews 11 (3): 285-292.

10. Jain, S.K. (1987c), Ethnobotany-its scope and various sub disciplines. In S:K. Jain (ed.) A manual of Ethnobotany. Scientific Publishers, Jodhpur.
11. Kala, C.P. (2005), Ethnomedicinal botany of the Aptani in the Eastern Himalaya Region of India Journal of Ethnobiology and Ethnomedicine 2005, 10(11).
12. Kapur, S.K. (1996), Traditionally important medicinal plants of Bhaderwah Hills Jammu, Province - II, 62-69. In Maheshwari, UC. (ed.); Ethnobotany in South Asia. J. Econ, Taxon Bot. Additional series, 12. Scientific Publishers, Jodhpur (India).
13. Kaur, Ismeet, Sharma Shalini and Lal Sukhbir (2011), Ethnobotanical survey of Medicinal plants used for Different diseases in Mandi district, Himachal Pradesh, International Journal of research of Pharmacy and Chemistry, IJRPC. 1(4)
14. Kharwal ,Anjana D. and Rawat Dhiraj S. (2012), Ethnobotanical notes on indigenous herbal shampoos of Shivalik hills, Himachal Pradesh, (India). Plant Science Feed. 2(6): 88-90.
15. Manilal, K.S. (1989), Linkages of ethnobotany with other sciences and disciplines. Ethnobotany 1 : 15-24.
16. Negi, P.S. and Subramani, S.P. (2002), Ethnobotanical study in village Chhitkul of Sangla Valley, Kinnaur district, Himachal Pradesh, J. non-timber forest prod. 9 (3-4): 113-120.
17. Prakash Vipin and Aggrawal Ashok (2010), Traditional uses of ethnomedicinal plants of lower foot-hills, Himachal Pradesh-1. Journal of traditional knowledge vol.9(3):519-521.
18. Schultes, R.E. (1960), Tapping our heritage of ethnobotanical lore. Econ. Bol 14:257-262.
19. Schultes, R.E. (1986), The reason for ethnobotanical conservation. Bull. Bot. Sur. India. 28 (1-4):203-224.
20. Sen Sharma, P. (1995), Plants in Indian Puranas_ An Ethnobotanical Investigation. Nayaprakash, Calcutta.
21. Sharma, O.P. (1976), Some useful wild plants of Himachal Pradesh, College of Biosciences, HPU, Shimla.
22. Sharma, P.K. and Chauhan N.S. (2000), Ethnobotanical studies of Gaddi-a tribal community of Kangra district, Himachal Pradesh, in :Kohli, R.K., Singh H.P, Vij S.P, Dhar K.K., Batish D.R. and Dhiman B.K. (eds) Man and Forest, Punjab University Chandigarh, 301-302.
23. Sharma, P.K., Chauhan, N.S. & Brij Lai (2003), Commercially important medicinal and aromatic plants of Parvati Valley, Himachal Pradesh, J Econ Tax Bot, 27 (4)937-942.
24. Singh, K.K. and Kumar, K. (2000), Ethnobotanical wisdom of Gadditribe in western Himalaya (Bishen Singh, Mahendra Pal Singh, Dehra Dun).
25. Singh, S.K. (1999), Ethnobotanical study of useful plants of Kullu district in Northwestern Himalaya, India, J. Econ Tax Bol, 23(1) (1999), 185-198.
26. Thakur, N. Savitri and Bhalla, T.C. (2004), Characterization of some traditional fermented foods and beverages of Himachal Pradesh, Indian J Traditional Knowledge, 3 (3): 325.
27. Thakur, S. (2001), Study on the ethnobotany of Rewalsar (Mandi District, Himachal Pradesh, India) Ph.D. thesis, Himachal Pradesh University, Shimla.
28. Uniyal, M.R. and Chauhan, N.S. (1982), Commercially important medicinal plants of Kullu, Forest Division of Himachal Pradesh, Nagarjuna, 15 (1) 4.
29. Warman, C.K. (2004), Trees of India, (Medicinal commercial, Religious and ornamental). CBS Publishers and Distributors Darya Ganj, New Delhi