



Ethnomedicinal aspects of some plant species among flora of Sri Ganganagar district Rajasthan

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Abstract

Sri Ganganagar is situated between 28.4 to 30.6 North latitude and 72.2 to 75.3 East longitude. The present paper deals with identification and ethnomedicinal uses of 20 tree species belonging to different families which are observed among the flora of Sri Ganganagar district of Rajasthan used by local and tribal communities. These people use herbal medicines for the treatment of various diseases. Twenty tree species like *Acacia nilotica* (L.) Willd., *Aegle marmelos* (L.) Corr, *Ailanthus excelsa* Roxb., *Albizia lebbek* (L.) Benth., *Azadirachta indica* A. Juss, *Bauhinia variegata* L., *Capparis decidua* (Forssk.) Edgew, *Cassia fistula* L., *Dalbergia sissoo* Roxb., *Embllica officinalis* Gaertn., *Ficus benghalensis* L., *Ficus religiosa* L., *Moringa oleifera* Lam., *Pongamia pinnata* (L.) Pierre, *Prosopis cineraria* (L.) Druce, *Salvadora oleoides* L., *Syzygium cumini* (L.), *Tamarindus indica* L., *Tecomella undulata* (Sm.) Seem and *Terminalia arjuna* (Roxb. ex Dc.) Wt and Arn have been used by tribal communities. These tree species have great significance to be used in drugs and pharmaceutical industries.

Keywords: ethnomedicinal aspects, tribal communities, Sri Ganganagar, Rajasthan

Introduction

Sri Ganganagar district is situated between 28.4 to 30.6 North latitude and 72.2 to 75.3 East longitude. It constitutes a part of Great Indian Desert. It is spreading over 11, 154.66 sq. km. East is bounded by Hanumangarh district, South by Bikaner district, the West by Bahawal nagar district of Pakistani Punjab and the North by Punjab. Local and tribal communities use herbal medicines for the treatment of various diseases. Herbal medicines used by local and tribal communities belong to different families such as Mimosaceae, Rutaceae, Simaroubaceae, Capparaceae, Meliaceae, Caesalpiniaceae, Fabaceae, Euphorbiaceae, Moraceae, Myrtaceae, Moringaceae, Salvadoraceae, Bignoniaceae and Combretaceae. Therapeutic values of various plants have been recorded in various literatures standing from the Vedic era [1, 2, 4, 9, 11, 13]. In Rajasthan a great deal of work has been done on ethnomedicinal plants utilized for different diseases used by tribal communities [6, 7, 8, 10]. The current paper records the plants of ethnomedicinal importance in the Sri Ganganagar district of Rajasthan used tremendously by local & tribal communities. The present investigations have great significance to be used in drugs and pharmaceutical industries.

Material and Methods

To collect and document these valuable information, several field trips were conducted in the district of Sri Ganganagar.

On the basis of interviews with experienced people of various communities as they have a lot of knowledge regarding therapeutic importance of local plants. Repeated enquires and group discussion on medicinal uses of some plants were made to ascertain the authenticity of information. For the collection of specimens as future reference and their preservation herbaria Jain and Rao (1976) was followed. All the specimens have been authenticated from B.S.I. Jodhpur, F.R.I. Dehradun and preserved in the herbarium, department of Botany, Govt. Dungar P.G. College, Bikaner Rajasthan [3, 12].

Ethnomedicinal tree species of Sri Ganganagar district Rajasthan used in herbal medicines are *Acacia nilotica* (L.) Willd., *Aegle marmelos* (L.) Corr., *Ailanthus excelsa* Roxb., *Albizia lebbek* (L.) Benth., *Azadirachta indica* A.Juss, *Bauhinia variegata* L., *Capparis decidua* (Forssk.) Edgew., *Cassia fistula* L., *Dalbergia sissoo* Roxb., *Embllica officinalis* Gaertn, *Ficus benghalensis* L., *Ficus religiosa* L., *Moringa oleifera* Lam. *Prosopis cineraria* (L.) Druce, *Pongamia pinnata* (L.) Pierre, *Salvadora oleoides* L., *Syzygium cumini* (L.), *Tamarindus indica* L. *Terminalia arjuna* (Roxb. ex Dc.) Wt and Arn. Twenty tree species have great therapeutic value are arranged systematically with their botanical name, family, local name, part used and ethnomedicinal uses in Table 1.

Table 1: The ethnomedicinal plant parts and their uses

S.No.	Botanical Name	Family	Local Name	Parts used	Ethnomedicinal uses
1.	<i>Acacia nilotica</i> (L.) Willd.	Mimosaceae	Babul, Kikar	Fruit Powder	Dysentery
				Bark Powder	Skin diseases, Piles
				Gum	Diabetes, Urinary discharge
				Bark Paste	Healing wounds and cuts
2.	<i>Aegle marmelos</i> (L.) Corr.	Rutaceae	Bel, Bel-patra	Decoction of Leaves	Jaundice

				Fruit Pulp	Constipation
				Unripe Fruit	Chronic diarrhea, dysentery
3.	<i>Ailanthus excelsa</i> Roxb.	Simaroubaceae	<i>Arru, Vilayti Neem</i>	Stem bark	Cough and Cold
				Juice of leaves, Stem bark	Skin eruptions
				Bark Powder	Snake bite, tonic after child birth
				Extract of Bark	Asthma, Bronchitis and pneumonia
				Paste of stem Bark	Boils, Pimples and ulcer
4.	<i>Albizia lebbek</i> (L.) Benth	Mimosaceae	<i>Saras, Siras</i>	Leaves	Night Blindness
				Leaf Paste	Snake bite, Scorpion Sting
				Root Bark	Strengthening Gums
				Seed Oil	Leucoderma
				Dried fruit powder	Piles
5.	<i>Azadirachta indica</i> A. Juss	Meliaceae	<i>Neem</i>	Bark	Cough, fever, loss of appetite, worm infection
				Seeds, Leaves	Malaria, Worm infection, Excessive bleeding, skin diseases
				Twigs	Gum Infections
				Fruit Powder Paste	Kill lice in hair
				Bark	Skin diseases
6.	<i>Bauhinia variegata</i> L.	Caesalpiniaceae	<i>Kachnar</i>	Root paste	Antidote to snake bite
				Root powder	Abdominal disorders
				Decoction of flowers	Cough, Piles, Hemorrhage Conditions
				Dried flowers bud, leaves	Piles, dysentery, diarrhea
				Root Juice	Cure headache
7.	<i>Capparis decidua</i> (Forsk.) Edgew	Capparaceae	<i>Kair</i>	Flower Buds	Stomachache
				Root Paste	Scorpion bite
				Root Bark	Cough, Asthma
				Stem	Pyorrhea, Rheumatism
				Seeds	Leucorrhoea, Diarrhea
8.	<i>Cassia fistula</i> L.	Caesalpiniaceae	<i>Amaltas</i>	Leaf Juice	Stomachache, Hepatitis
				Pod and seed extract	Stomach problem, fever
				Decoction of Fruit Pulp	Gastric disorders, Constipation
				Root Paste	Skin Diseases, Syphilis
				Bark Powder	Diabetes, Heart Problems
9.	<i>Dalbergia sissoo</i> Roxb.	Fabaceae	<i>Talli, Sishum</i>	Powder of dried leaves	Leucorrhoea
				Leaf Juice	Urine inflammation, dysentery
				Powder of Bark	Piles, Pneumonia
				Decoction of leaves	Gonorrhea
				Paste of leaves	Diabetes
10.	<i>Emblica officinalis</i> Gaertn.	Euphorbiaceae	<i>Amla</i>	Juice of Bark	Gonorrhea, Diabetes
				Powder of Seeds	Leucorrhoea
				Fruit	Leucorrhoea, Constipation, Cough, Increase appetite
				Dry fruit powder	Blacken the hair
11.	<i>Ficus benghalensis</i> L.	Moraceae	<i>Bargad</i>	Leaf extract	Diarrhea
				Latex	Sexual impotency, piles, nose problem, Rheumatism, Pyorrhea
				Powder of root	Dysentery, Inflammation of Liver, Syphilis
				Paste of Leaves	Wounds
				Stem bark	Diabetes
12.	<i>Ficus religiosa</i> L.	Moraceae	<i>Pipal</i>	Dried powdered fruit	Asthma
				Powder of Roots	Ulcer, diarrhea, dysentery cholera, cough, asthma, hemorrhages, gonorrhea.
				Leaves	Inflammatory ulcer
13.	<i>Moringa oleifera</i> lam.	Moringaceae	<i>Sanjna Sahnjna</i>	Leaf, Fruit	Diarrhea, Arthritis
				Paste of Leaves	Heals Wounds
				Flower Juice	Urinary Problem
				Fresh root bark powder	Cardiac and Circulatory tonic

				Seed Powder	Epilepsy
14.	<i>Pongamia pinnata</i> (L.) Pierre	Fabaceae	<i>Karanj,</i> <i>Karanji</i>	Dried Seed Powder	To Kill lice, Drandruff
				Bark Powder	Diabetes
				Seed Oil	Skin diseases, Pimple, wound
15.	<i>Prosopis cineraria</i> (L.) Druce	Mimosaceae	<i>Khejri, Khejra</i>	Flowers mixed with sugar	As a safe guard against miscarriage during pregnancy
				Bark paste	Rheumatism
				Fruit	Arthritis, Rheumatism
16.	<i>Salvadora oleoids</i> Decne.	Salvadoraceae	<i>Jal, Pilu</i>	Leaves	Cough
				Roots	Pyorrhoea
				Fruit	Snake bite, Aphrodisia
				Paste of Leaves	Swellings
17.	<i>Syzygium cumini</i> (L.) skeels	Myrtaceae	<i>Jamun</i>	Fruit Juice, and Seed Powder	Cure diabetes
				Leaves Powder	Headache
				Decoction of Bark	Remove kidney stone
18.	<i>Tamarindus indica</i> L.	Caesalpiniaceae	<i>Imli</i>	Juice of Fruit Pulp	Heat stroke, Injury, fever
				Leaves	Headache, Bodyache
				Infusion of fruit Pulp	Useful for loss of appetite
19.	<i>Tecomella undulata</i> (Sm.) Seem	Bignoniaceae	<i>Rohira,</i> <i>Roheda</i>	Root Powder	Leucorrhoea
				Bark Paste	Eczema, Eruptions, Syphilis
				Bark, Leaf decoction	Cough, Cold, Fever
				Seed powder with ghee	Abcesses.
20.	<i>Terminalia arjuna</i> (Roxb. ex Dc.) Wt & Arn.	Combretaceae	<i>Arjun</i>	Decoction of Leaves	Diabetes
				Bark Powder	Heart Problem

Conclusion

The ethnobotanical survey has revealed valuable information regarding the utilization of 20 medicinal plants of Sri Ganganagar district of Rajasthan. Ethnomedicinal plants are used by tribal communities for the treatment of various diseases such as cough, cold, asthma, leucorrhoea, fever etc. The current study indicates that seasonal survey and collection of such plant species are quite useful for detecting medicinally significant. Such kind of study help plenty in supporting the matter of medicine and also in protecting the ayurvedic system of drugs.

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