



STUDIES OF ETHNO-MEDICINAL PLANTS IN JAMWA RAMGARH WILDLIFE SANCTUARY

Dr. Ramesh Chand Meena*

Department of Botany, SPNKS Govt. P.G. College, Dausa, Rajasthan, India.



*Corresponding Author: Dr. Ramesh Chand Meena

Department of Botany, SPNKS Govt. P.G. College, Dausa, Rajasthan, India.

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ABSTRACT

In Rajasthan, Jamwa Ramgarh Wildlife Sanctuary has provided a large number of medicinal uses plants. Medicinal uses of these plants are applying on the base of ethno-botanical methods. Mainly medicinal plants are identified including Neem (*Azadirachta indica*), Bel (*Aegle marmelos*), Aak (*Calotropis procera*), Satavar (*Asparagus racemosus*), Chirmi (*Abrus precatorius*), Chirchita (*Achyranthes aspera*), Brahmi-buti (*Centella asiatica*), Gadumba (*Citrullus colocynthis*) and Datura (*Datura metel*) with their various importance's. Rural communities which are located around the sanctuary have useful traditional information about these plants. For the treatment of wide range of diseases numerous plant parts, such as roots, stems, bark, leaves, seeds, flowers, and fruits, are used.

KEYWORDS: Medicinal uses, Wildlife Sanctuary, Communities, Traditional information, Ecological conservation.

INTRODUCTION

The Jamwa Ramgarh Wildlife Sanctuary serves as a rich source of these diverse plants, which are vital for the treatment of many ailments in the region. Jamwa Ramgarh Wildlife Sanctuary, located in the Jaipur district, has an abundance of medicinal plants. The rural communities of study area possess extensive knowledge of the ethnomedicinal plants found in their surroundings. The region is predominantly inhabited by rural people. This research examines 45 wild plant species belonging to 40 genera and 25 families utilised for ethnomedicine by the people of study area. The dominant families are Moraceae, Fabaceae, Solanaceae, Cucurbitaceae and Euphorbiaceae. Plant components, including stem, roots, bark, leaves, seeds, flowers, pods, gum, and latex, can be used to cure various ailments. This study aims to raise knowledge about the ethnomedicinal significance of plants and their uses.

AIM OF THE STUDY

This study was aimed to recognize the medicinal properties of studied area and know about the importance of medicinal plants for better human health.

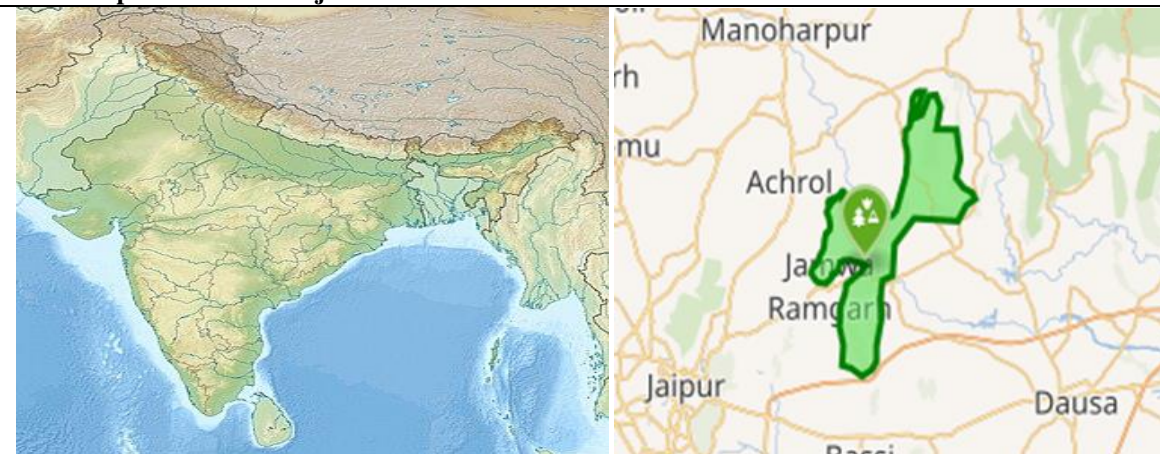
Review of Literature

Originally a hunting preserve of the Jaipur Maharajas, the area was notified as the reserve forest in 1961 before its upgrade to full sanctuary status in June 1982 with additional areas. During the 1982 Asian Games held in New Delhi, Ramgarh Lake hosted the rowing events. Jaipur lies in India's semi-arid zone, which has high temperatures, limited rainfall and a pleasant winter. Jamwa Ramgarh tract's climate is subtropical, with defined summer, monsoon and winter seasons. The average temperature in Jaipur is 36 degrees Celsius, with the warmest and coldest months being January and June, respectively at around 18 °C and 40 °C. The Jamwa Ramgarh Forest Range falls within the wide category of "Dry Tropical Forests". In valleys with excellent soil and moisture conditions, forests grow well. *Anogeissus pendula*, also known as dhoak is the predominant species of the tree, accounting for more than 80% of the area. Its associates, such as *Gurjan* (*Linnea coromandelica*) and *Salar* (*Boswellia serrata*), grow in arid areas and on rocks. Flora of Rajasthan vol. 1-3 Sheety and Singh (1987- 93) and Flora of Indian desert Bhandari (1990) were also consulted.

Jamwa Ramgarh Wildlife Sanctuary

Location in Rajasthan, India

Show map of India and Rajasthan



Location	Jaipur district, Rajasthan, India
Nearest city	Jaipur
Coordinates	27°02'52"N 76°03'20"E
Area	300 km ² (120 sq mi)
Established	1982
Governing body	Rajasthan Forest Department

Study Area

Jamwa Ramgarh Wildlife Sanctuary is a protected area situated about 35 km north-east of Jaipur in the Jaipur district of Rajasthan, India. Established in 1982, the sanctuary covers approximately 300 km² in the Aravalli Range and encompasses the now-dry Ramgarh Lake basin and surrounding forests. The study was conducted in twelve villages located in the vicinity of Jamwa Ramgarh Wildlife Sanctuary. The sanctuary's terrain is a mosaic of dry deciduous forests, rocky hills and grasslands. It surrounds Ramgarh Lake—once a 15.5 km² reservoir supplying Jaipur, now largely dried up since 2000. The Banganga River, rising in the Bairath hills, cuts across the sanctuary, sustaining patches of riparian vegetation.

MATERIAL AND METHODS

The relevant data was collected from January 2023 to June 2025 by field walk and household survey via semi-structured questionnaire. A total of 300 respondents

(women, men and children) of different age groups were selected randomly and taken into consideration for data gathering and interviews. Pre-structured questionnaires were used to gather the information from each respondent. In surveys besides tribal people and traditional communities, the information was also collected from non-tribal people like forest officials, college students from rural areas etc. who have enough knowledge regarding ethno-botanical uses of plants due to their long association with tribes and long stay in the rural areas. Data on plant consumption for medicines and food as well as the quantity utilized, were recorded. The plants found during field visits were identified with the help of herbarium of university of Rajasthan.

A total of 41 wild medicinal plant species (Table-1) were identified in the study area during the current study. These medicinal plants are arranged in alphabetical order of their scientific name, common name along with family followed by uses.

Table 1: Ethno- medicinal plants used by rural people of study area.

S. No	Botanical Name	Common Name	Family	Ethno-medicinal uses
1.	<i>Acacia nilotica</i> L	Babool	Fabaceae	Leaves as astringent and remedy for diarrhea
2.	<i>Acacia senegal</i> (Linn.) Willd	Kumatha	Fabaceae	Gum is demulcent and cures intestinal trouble. Used in malaria and cough
3.	<i>Abutilon ramosum</i> . Guill. Perr.	Atibala	Malvaceae	The powdered root is used in the treatment of stomach ailments.
4.	<i>Adhatoda vasica</i> Nees.	Adusa	Acanthaceae	Leaf extract used for asthma, bleeding gum, bronchitis and pyorrhea.
5.	<i>Aegle marmelos</i> (Linn.) Correa	Bel	Rutaceae	Used in jaundice, piles, vomiting, urinary complaints, obesity and gastro intestinal diseases
6.	<i>Asparagus recemoues</i> (Willd)	Shatavari	Asparag-aceae	Root power used for cold and cough treatment.

7.	<i>Azadirachta indica</i> A. Juss.	Neem	Meliaceae	The leaves are excellent for treating wounds, boils, chronic ulcers, and smallpox eruptions.
8.	<i>Achyranthus aspera</i> . Linn	Ounga	Amaranthaceae	For coughs, powdered root combined with honey and pepper is given.
9.	<i>Balanitits roxburghii</i> Planch.	Hingot	Zygophyllaceae	Pulp used as a remedy for cough and skin diseases
10.	<i>Boerhavia diffusa</i> Linn	Santhi	Nyctagi-naceae	Used as fooder, whole plant useful in jaundice, anemia, cardiac disorder, constipation, bronchitis and general debility.
11.	<i>Calotropis procera</i> (Ait) W.T. Aiton	Akra	Apocynaceae	Whole plant – antioxidant, antitumor, and anti malarial activity. Leaves used in the treatment of knee joint pain (Leaves with oil are heated and applied externally), Latex is applied on wounds of snake bite to neutralized poison.
12.	<i>Capparis decidua</i> (Forssk.) Edgew	Ker	Capparaceae	The stem is used in pyorrhoea and Rheumatism
13.	<i>Cuscuta reflexa</i> . Roxb.	Amar bel	Cuscutaceae	Used externally in the treatment of itch and for washing sores.
14.	<i>Citrullus colocynthis</i> (Lischard) Schrad	Gadtumba	Cucurbitaceae	Roasted fruits are used to cure joint pain.
15.	<i>Datura metel</i> Linn	Datura	Solanaceae	Plant juice cures hydrophobia, boiled leaves as a poultice to relieve pain.
16.	<i>Euphorbia hirta</i> L	Dudhi	Euphorbiaceae	Warts and skin diseases (leucodermal spots) are treated with latex
17.	<i>Eclipta alba</i> Linn	Bhringiraj	Asteraceae	Whole plant – anti inflammatory, anthelmintic, diuretic. Used for strengthening and blackening of hair
18.	<i>Ficus glomerata</i> Roxb	Gular	Moraceae	The bark used in skin diseases
19.	<i>Ficus benghalensis</i> Linn.	Bargad	Moraceae	The plants' milky latex is applied externally on blisters, boils, and cracked heels.
20.	<i>Ficus religiosa</i> Linn	Peepal	Moraceae	Leaves used to treat skin conditions and help heal wounds and bruises
21.	<i>Flacourtia indica</i> . Burm.f	Cocon	Salicaceae	Most parts are used for pneumonia, cough and bacterial sore throat infection.
22.	<i>Grewia tenax</i> Forsk	Ganger	Tiliaceae	Plant-based remedies are utilised to strengthen boues, promote tissue repair, and cure fractures. Fruits are utilised to promote fertility in females.
23.	<i>Leptadenia pyrotechnica</i> (Forssk) Decne	Kheenp	Apocynaceae	To remove thorns from the body, plant sap is applied to the wound.
24.	<i>Launaea procumbens</i> Linn	Van gobhi	Asteraceae	For painful urination, the plant is grinded in water and given orally together with sweets (Misri).
25.	<i>Maytenus emarginata</i> Linn	Kakeda	Celastraceae	The fruits are cooling, delicious, and blood-purifying. Used to cure piles and ulcers.
26.	<i>Momordica balsamina</i> L	Kakoda	Cucurbitaceae	Used in skin disorders, hepatitis, excessive uterine bleeding, rheumatism and fever.
27.	<i>Morus alba</i> Linn	Sehtoot	Moraceae	Bark is used to treat cough, wheezing, edema and to promote urination.
28.	<i>Moringa oleifera</i> Lamk	Sehnjana	Moringaceae	Bark is used to treat skin infections, wounds. Roots are used to treat ulcers, kidney stones and inflammation.
29.	<i>Ocimum americanum</i> Linn	Van tulsi	Lamiaceae	For fever and cough, whole plant decoction is utilised. Moreover used as a toothache remedy.
30.	<i>Phyllanthus emblica</i> Linn.	Anwala	Phyllanthaceae	Used in Leprosy, Burning sensation, Vomiting, Leucorrhoea, Thirst, Constipation, Inflammation.
31.	<i>Rumex dentatus</i> Linn	Van palak	Polygonaceae	Whole plant- antibacterial and antifungal activity.
32.	<i>Ricinus communis</i> L	Arand	Euphorbiaceae	The leaves are warmed and rubbed with oil, which is then applied to the belly to relieve postnatal pain, the knee, and other afflicted areas to relieve pain.
33.	<i>Rhus mysorensis</i> . Don	Dhansale	Anacardiaceae	Fruits used in the treatment of diabetes.
34.	<i>Solanum nigrum</i> L	Makoy	Solanaceae	Whole plant is diuretic, laxative

				antiseptic, antidysenteric and effective in chronic diseases, such as acne, eczema and psoriasis
35.	<i>Sida cordifolia</i> Linn	Khirenti	Malvaceae	For rheumatism and intermittent fever, plant extract is utilised.
36.	<i>Tephrosia purpurea</i> (L) Pers	Jhojaru	Fabaceae	A plant decoction is used to treat Dhamsia(cough with blackphlegm) a frequent illness in rural areas, as well as an anthelmintic for children and a blood purifier.
37.	<i>Tinospora cordifolia</i> Thunb	Giloy	Menispermaceae	Plant aqueous extracts are commonly used to treat jaundice and are also useful in treating chronic fevers like dengue and chikungunia.
38.	<i>Tribulus terrestris</i> Linn	Gokharu	Zygophyllaceae	Fruits are diuretic and used to expel kidney stone. And useful in bladder, urinary tract and urogenital related conditions.
39.	<i>Tridax procumbens</i> Linn	Pathar phodu	Aster-aceae	It's have antioxidant, antiviral, anti inflammatory activity and wound healing activity Leaf juice is applied on cuts and wounds to stop bleeding.
40.	<i>Withania somnifera</i> (L) Dunel	Ashwagandha	Solan-aceae	Decoction of roots is beneficial for leucorrhoea and debility resulting from old age.
41.	<i>Ziziphus nummularia</i> Wt & Arn	Jhadi ber	Rham-naceae	Raang is prepared by boiling the roots in water. Rural women boiled wheat grains in the raang and made laddus to treat menstruation issues.

RESULT

The results of the ethnobotanical survey conducted in the study region have provided significant knowledge into the various uses of many medicinal plants of Nahargarh wildlife. Evaluating the enumeration reveals that many of the medicinal plants and their varied components are utilised by the locals in this area to cure a variety of ailments.

The goal of the current study is to highlight the traditional medicinal uses made by the study area's inhabitants for a variety of plant components, including roots, stems, flowers, seeds, fruits, etc. The ethnomedicinal benefit of plants may be brought to the attention of pharmacologists and pharmaceutical companies through this study. The research are conducted add to the current knowledge of traditional remedies. Both the extraction and characterization of the bioactive substances as well as the farming of public health policies depend heavily on the documentation of such knowledge. So individuals are utilise it in the same area or in the others areas.

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