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## ETHNOMEDICINAL DIVERSITY OF RAJASTHAN STATE: TRADITIONALLY USED BY LOCAL HABITANTS

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### ABSTRACT

*This research aims to provide an accurate understanding of the therapeutic properties possessed by a selection of plants. In doing so, the researchers want to pave the way for the treatment of diseases using herbal medications that are free from adverse effects. In India, medicinal plants play a significant role in the delivery of health care to approximately 80 percent of the country's population. Plants have been a significant source of precursors and products utilised in a range of sectors, including those of pharmaceuticals, food, cosmetics, and agrochemicals. Plants have also played an important role in environmental sustainability. Folk medicine in India was the stepping stone that eventually led to the development of traditional medical practises like Ayurveda. Tribal people in the Indian state of Rajasthan have a long tradition of using herbal medicine. An exhaustive survey of the southern section of the state of Rajasthan, including the districts of Chittorgarh, Udaipur, Banswara, and Dungarpur, was conducted with the purpose of documenting the traditional knowledge of medicinal plants utilised by the local tribal groups. In this region, indigenous peoples such as the Bhil, Damor, Garasia, Kalbelia, Kathodia, and Meena can be found living. These people and their medicine men and women have a wealth of knowledge on the qualities of plants and how they might be used for therapeutic purposes. In this article, an effort has been made to document the traditional uses of 31 plant species, which are from 31 different genera and 22 different families and are employed by the tribal people .*

**keywords:** Ethnomedicinal, Rajasthan, Traditionally



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## **INTRODUCTION**

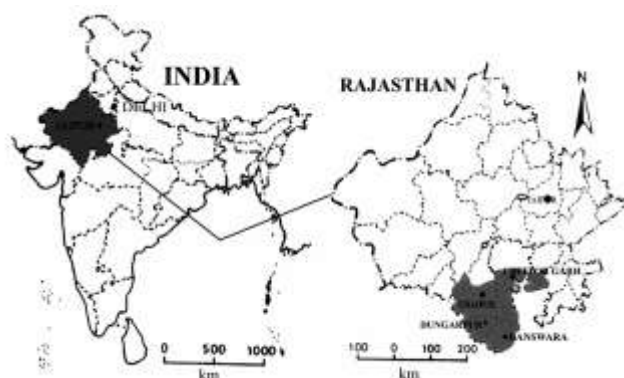
One of the most interesting and important parts of ethnobotany is the use of traditional forms of folk medicine. Indian tradition has always included the use of various plants for medicinal purposes, and this age-old custom is deeply engrained in the country's culture. People of many ethnicities and tribal groupings all over the world have each developed their own distinctive culture, attire, and medical practises, among other things, through the course of their long and varied history. These communities have access to a large quantity of information regarding medicinal plants and make use of a wide variety of plants collected from the wild as well as those cultivated in cultivation in order to treat a number of illnesses. In addition, they employ medicinal plants in combination with other treatments to treat a variety of ailments. Located in the far northwestern part of India, the state of Rajasthan is both one of the most populated states in the country and one of the most geographically varied. Regarding its placement on the surface of the earth, it may be located anywhere between the longitudes of 23 and 3, 30 and 12, 69 and 30, and 78 and 17, respectively. The area known as the tribal belt may be found in the southern part of Rajasthan. This region is comprised of the administrative districts of Banswara, Chittorgarh, Dungarpur, and Udaipur, among others. The Bhil, Damor, Garasia, Kathodia, and Meena are the most prominent tribes in this part of the world. They placed a significant cultural emphasis on the flora that naturally occurred in their surroundings. The bulk of this population obtains their medical treatment from their traditional healing system, and the information surrounding herbal medicine is passed down verbally from one generation to the next. The climate in the southern part of Rajasthan, which is dominated by tribal people, is tropical. Maximum temperatures during the summer range from 38.3 to 46.0 degrees Celsius, while lowest temperatures during the winter range from 7.0 to 11.6 degrees Celsius. It has been determined that there is an average rainfall of 65.03 millimetres that occurs annually. Wall. ex Guill & Perr., *Anogeissus latifolia* (Roxb. ex DC.), *Anogeissus pendula* Edgew, *Balanites aegyptiaca* (Linn.) Delile., *Boswellia serrata* Roxb., *Diospyros melanoxylon* Roxb., and *Madhuca indica* Roxb., *Anogeissus latifolia* (Roxb. *Tectona grandis* Linn, as described by J.F. Gmelin. A major amount of work in this field has been created by a large number of researchers in India, notably in the state of Rajasthan. On the other hand, there



is a dearth of study on the ethnomedicinal plants that are indigenous to the southern region of Rajasthan. As a consequence of this, over the years 2018 and 2019, an attempt has been made to assemble the most up-to-date information possible concerning the plants that are exploited by indigenous peoples within the context of their traditional medicinal practises. Interviews were done with local tribal people who live in the region and are fully dependent on the plants that are present in their surrounding environment in order to carry out the research. These people dwell in the area in question.

### **Methodology**

Throughout the 2018-2019 academic year, students had the opportunity to go on field trips with members of the community's traditional medical community. Typically knowledgeable members of the indigenous population.



**Fig. 1 A map showing the location of the research area**

Concerning the herbal medication, they do not wish to provide all of the information because they believe that if the medicinal plant were to be made public, it would cause the plant to lose its beneficial medical properties. As a consequence of this, they do not wish to reveal all of the information. Consultations were held with individuals who are able to give knowledge on plants that have the potential to be used for medicinal purposes. The information that was acquired during the fieldwork was confirmed at several sites, with different informants, and throughout different periods of the year to guarantee that it was correct in regards to the medicinal qualities of plants. Each unique plant species that was compiled with the help of the informants has been named, documented, and photographed.



Additionally, each individual plant species has been given a scientific name. The voucher specimen was placed in the herbarium of the Department of Botany at MLV Government College, which is located in Bhilwara.

## RESULTS AND DISCUSSION

There have been 31 plant species catalogued and counted in total; these plants are from 31 distinct genera and 22 different families. The overall number of plant species is 31. The information on plants used in traditional medicine is shown in Table 1. This information contains the botanical name, the local name, the family, the time, as well as their customary methods of medication administration for treating a variety of illnesses. In the southern United States, a number of rural communities and cultural groupings make use of the therapeutic characteristics of the plants in question.

**Table 1 Traditional medicines employed by the local tribal people of southern Rajasthan**

Plant name/Family	Local name	Uses
Abrus precatorius L. Papilionaceae Acacia catechu (L.f.) Willd. Mimosaceae	Chirmu Ratti Khair katha	Patients suffering from ulcers are advised to chew on fresh leaves, while pregnant women should consume the seeds. The gum is utilised by male tribe members since it is forbidden for them to consume laddus produced from Anogeissus latifolia gum during the winter months; stomachaches are treated with pellets prepared from katha .



Acacia nilotica (L.) Willd. ex Del Mimosaceae	Boriyo	Bark paste is applied to wounds in order to speed up the healing process, and leaf paste is administered to cuts and wounds .
Acanthospermum hispidum DC. Asteraceae"	Dokanta	Goats are supplemented with fresh leaves in order to boost their milk output .
Achyranthes aspera L. Amaranthaceae	Andhi Jhara	An earthen pot is used to dry ripe seeds that have been combined with the latex of the Calotropis procera plant. After being dried, the seeds are removed, ground into a powder, and used with betel leaf to treat coughs .
Aegle marmelos (L.) Corr. Rutaceae	Billa	Constipation is treated by consuming fruit pulp on a regular basis, whereas chronic diarrhoea and dysentery are treated by consuming unripe fruit .
Anogeissus latifolia (Roxb. ex DC.) Wall. ex Guill & Perr. Combretaceae	Dhawari	In the form of laddu, the gum is also utilised after birth, in addition to being used during the winter season .



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Barleria prionitis L. Acanthaceae	Danteli, Kala bans	Coughs are treated with a decoction made from the leaves, and both the roots and the leaves are eaten to ease toothache and bodyache.
Butea monosperma (Lam.) Taubert. Papilionaceae	Khankra, Sura	Laddus made from the gum, also known as kamarkas, are consumed after delivery; blossom juice is given to children when they have a fever or cold; crushed seed on red stones is given to newly born infants in the event that they have diarrhoea .
Calotropis procera (Ait) R. Br. Asclepiada ceae	Akra	The root paste is applied to scorpion bites, and the rolled-up leaf is used to build smoking pipes. The dried stem is used as a piper, and the smoke of Xanthium fruit is breathed via the pipe, to ease headaches .



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Capparis decidua (Forsk.) Edgew. Capparaceae	Kair	Consuming the flower buds can help alleviate stomach aches; root paste can be used to treat scorpion bites, and powdered coal made from the stem can be consumed to treat broken bones .
Chlorophytum tuberosum (Roxb.) Liliaceae	Baker Liliaceae Dholi musali	During the winter months, dried fasciculate roots are utilised in the production of laddu by combining them with Anogeissus latifolia gum. This process takes place .
Curculigo orchioides Gaertn. Hypoxidaceae	Moosli	Root extract mixed with diluted curd is taken thrice .
Dichrostachys cinerea (L.) Wight & Arn. Mimosaceae	Goya-hair kolai	Root bark extract mixed with extract of stem bark of Butea monosperma and Ziziphus mauritiana Lam. is used .



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Echinops echinatus Roxb. Asteraceae	Oont Kantilo	Fresh root pieces are maintained at the back of the head contacting the scalped or a coil, or fresh root is kept in the naval before parturition time or during the pain of delivery in order to facilitate an easier delivery. Root extract is administered to patients with whooping cough .
Enicostema axillare (Lam.) Roynal Gentianaceae	Nami	In cases of fever, an extract of the whole plant is administered once daily, while in cases of bodily discomfort, the juice of the plant is consumed for a period of seven days .
Euphorbia caducifolia Haines Euphorbiaceae	Danda Thore	Burning the dried stem produces smoke, which is then held over the sore area of the body for a period of time in order to alleviate the pain .





Ficus benghalensis L. Moraceae	Bar, Bargad	Children get a patasha (sugar preparation) that is stuffed with latex on a daily basis for a period of seven days .
Grewia abutilifolia Vent. ex. Juss Tiliaceae	Gangchi	Root powder or decoction is administered to patients experiencing bone fractures, and animals are given root decoction.

**Table 2 Ethnomedicinal plants used by the tribals of Southern Rajasthan Contd**

Plant name/Family	Local name	Uses
Helicteres isora L .	Anteri, Maror hali	Fruit powder is taken with water for twice a day for 3 days.
Holoptelea integrifolia (Roxb.) Planch Ulmaceae	Sil, Kanjeri	The seed oil of the Holoptelea plant, also known as Kanjeri oil, is combined with sulphur, and then the mixture is stored for five days before being administered to the afflicted area.



Jatropha curcas L. Euphorbiaceae	Ratan Jot	The seed oil of the Holoptelea plant, also known as Kanjeri oil, is combined with sulphur, and then the mixture is stored for five days before being administered to the afflicted area .
Madhuca indica J.F. Gmelin Sapotaceae	Mori	The flowers are eaten to increase lactation; the leaves are applied as a poultice to eczema and bandage on the swelling or affected muscles; the leaf ash is mixed with butter to make a dressing for wounds and burns; the seed oil extract is a laxative; and the oil is applied to itchy skin. Mohri (local liquor) mixed with turmeric powder is useful in the treatment of colds, coughs, and bronchitis .
Medicago sativa L. Papilionaceae	Rizka	Leaf extract is taken at night for 3 days .
Peristrophe paniculata (Forsk.) Burm. Acanthaceae	Bhamwara Kakar	Leaf paste mixed with sugar is taken twice a day for three days .



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Ricinus communis L. Euphorbiaceae	Arandi	In the event of a muscle injury that does not result in bleeding, a leaf paste that has been infused with mustard oil is applied to the injured region; a leaf paste is applied to the head in order to alleviate headache pain; leaves that have been cooked with maize grain are used as a rat killer .
Solanum surattense Burm. f. Solanaceae	Kateli, Bhurangni	Crushed flowers are administered orally in the event of diarrhoea; dried fruit smoke is used to eliminate worms of teeth; and fruit decoction is used in cough and asthma. Hot poultice formed from crushed root and bark is applied locally for the treatment of hernia .



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Soymida febrifuga (Roxb.) A. Juss. Meliaceae	Rohini	In order to extract the yellow colour from the water, fresh or dried bark is cooked in the liquid. The bark is then knotted around the problematic area, and any residual extract is also administered at this point .
Tinospora cordifolia (L.) Miers Menispermaceae	Giloy	Stem juice that has been stored in the refrigerator overnight can be used to treat skin diseases, fever, jaundice, diabetes, and general impairment. Stem juice can also be consumed to treat leucorrhea .
Xanthium strumarium L. Asteraceae		Burning the dried fruits of Xanthium strumarium that have been stored on a dried stem of Calotropis procera and then inhaling the smoke .



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<p>Ziziphus nummularia (Burm, f.) Wight &amp; Arn. Rhamnaceae Jhari, Bordi</p>		<p>A bath in water that has been cooked with fruits is used to treat sun stroke, and a paste made from the leaves is used to the skin to treat cutaneous illnesses and to cure wounds and boils. In cases of diarrhoea in goats, a juice made from the stem bark of Butea monosperma and Z. nummularia as well as the root bark of Dichrostachys cinerea is administered .</p>
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Utilising both fresh and dried plant components, people in Rajasthan were able to cure a variety of diseases, including injuries, wounds, cuts, fever, diarrhoea, ulcers, swelling, bone fractures, potency, antipoisons, skin care, night blindness, toothache, asthma, cough, and colds. This was accomplished by using plant components. The paste or an extract prepared from these plants is commonly used to topically treat a broad variety of skin diseases, including boils, wounds, cuts, swellings, burns, eczema, and ringworm. Certain plants can be chewed or administered orally in the form of a decoction for the treatment of mouth ulcers, sore throats, toothaches, and other illnesses that are comparable to these ailments. It has been claimed that several of the plants that have shown to be successful in the treatment of a variety of ailments in other parts of Rajasthan and in other states also have similarly therapeutic characteristics in the area .

## CONCLUSION

People who live in rural regions and in tribal communities have a great faith in the traditions and practises that have been handed down from generation to generation, and they rely extensively on herbal medicines to treat a variety of ailments. As a result of the



diminishment of traditional culture, there is a real possibility that a sizeable percentage of the huge reservoir of information that the world possesses may be lost. As a consequence of this, the recording of conventional practises pertaining to the use of herbal remedies will become increasingly important in the years to come. There is an immediate and compelling need to research and document the priceless knowledge that is contained in ethnomedicinal practises. This is a prerequisite. When it comes to the process of developing new pharmaceuticals through further research, the documentation of information of this kind will be of tremendous use. The gathering of this information on ethnomedicinal plants would unquestionably be beneficial in the development of strategies for the preservation of traditional medicines, the cultivation of traditional crops, and the improvement of the economic wellbeing of the rural and tribal population in this part of Rajasthan. The medicinal plants and treatments described in this article need to undergo phytochemical, pharmacological, and clinical testing in order to discover the nature of their active ingredients and whether or not they are effective treatments .

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