

# Ethnomedicinal and Ethno-veterinary plants of Dang area of Dholpur, District, Rajasthan, India

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## ABSTRACT

The tribal communities of Dang area of Dholpur district Rajasthan have rich knowledge about ethnomedicinal and ethnoveterinary plants of their surroundings. The traditional knowledge of plants species to cure an ailment is confined to primitive people and passes from one generation to another generation. Present paper deals with many plants species which are used as ethnomedicine by natives of Dang area of Dholpur district Rajasthan. Various parts of plants like root, stem, stem- bark, leaf, flower, seeds pods, gum, latex etc. are used to treat different ailments. Their mode of administration includes fresh plant part, paste, decoction, extract, and poultice etc.

*Key words: Ethnomedicinal, Ethnoveterinary, Communities, Traditional, Ethnomedicine.*

## Introduction

The practice of traditional folk medicine is a wide and very important aspect of ethno-botany. The traditional art of healing through medicines obtained from plants is an important characteristic feature of Indian culture. There has been an increase in recent boom in ethnomedicinal plants and mainly this reason resumes in the interest of THM (traditional herbal medicine) especially the "tribal medicine". The renewal of interests in plant based drugs, started because natural drugs are safer to use and are healthier. The information about herbal medicines through the word of mouth is going on from one generation to another generation since ages and some time in the form of historical scripts. Ethnomedicinal and ethno-veterinary plants play a vibrant part in inhibiting different disorder in human-being and cattle. Due to the availability of the secondary metabolites as stated above, help in the form of anti-diuretic, anti-analgesic, anti-cancer, anti-vi-

ral, anti-malarial, anti-fungal, anti-inflammatory activities. In the making of new herbal medicine, herbal plants are screened on the basis of phytochemical elements.

## Study Area

*Dholpur district is situated in the north-east corner of Rajasthan. On the district's north lies Bharatpur and the Uttar Pradesh border. On the south-east is the border with Madhya Pradesh and on the west is the district Karauli. Dholpur lies between latitudes 22°21'19" and 26°57'33" North and longitude 77°13'06" and 78°16'45" East. In Dholpur district Chambal River forming the southern. Bank of Chambal River is strongly divided by ravines; western region low ranges of hills provide simply worked red sandstone and fine grained. In India Rajasthan is the largest state with the dense forest, rivers, deserts and plateaus and the geographical features. It is centrally situated in the Rajasthan easternmost part.*

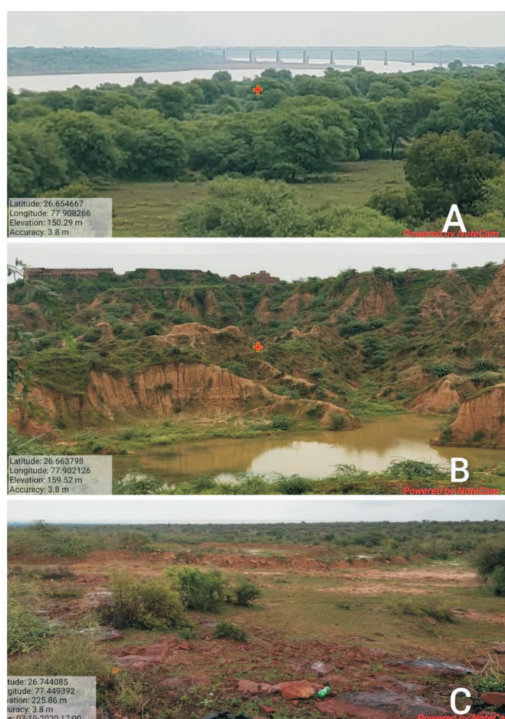


Fig. Habitat of rich biodiversity in the Dang region of Dholpur District

- A. Vegetation near Chambal River B. Chambal ravines (near Dholpur)  
C. Hilly or Dang region near Baseri tehsil

## Materials and Methods

This study was designed on the medicinal plants of Dang area of Dholpur which are essential part of tribe's life. The study was conducted in two seasons from Feb 2020 to Dec 2021. Tribal persons were interviewed to collect data about ethnomedicinal and ethnoveterinary plants by a structured questionnaire during interactive sessions.

A list of important medicinal plant was prepared on the basis of information gathered. From this list about 38 plants were selected for further study considering their.

- Potential use for normal and therapeutic purpose.
- Consumption by local population.
- Seasonal availability

Survey was conducted in the proposed area of study and the entire collected flora was brought in experimental laboratory for identification. The plants were identified in the Herbarium, Department of Botany, University of Rajasthan, Jaipur by using various references, the comparison between

the plants especially herbal plants of Dang area of Dholpur and adjoining areas was also carried out. The species which are used by tribal natives of dang area of Dholpur district Rajasthan.

## Observation

### *Asparagus racemosus* Willd.



**Medicinal Properties** *Asparagus racemosus* is used as herbal drug according to information of local people of Dang region of Dholpur district. *A. racemosus* supplementation and its effect on digestion, udder, milk production and energy metabolism, reproductive health, blood metabolites and immune system of dairy cows. The tribals used powder of this plant root mainly for galactagogue. In addition this plant is also recommended by local people for dyspepsia, curing of peptic ulcers, certain infectious disorders, nervous system diseases, diarrhoea, inflammation and liver problem. It has important use to augment immunity against pathogens like fungi, helminthes, protozoa, virus and bacteria. For joint stiffness, it is highly used. Its root is effective for antispasmodic, aphrodisiac, demulcent, diuretic and refrigerant. Combination of its root has more application for instance boiling of root with rice bran oil can inhibit several skin problems and with milk, it is used with Shatavari that is a crucial herbal drug in ayurveda to prevent women problems such as fertility. Its rhizome part is applied as soothing tonic, which has efficacy to respiratory system, circulatory system, female reproductive organs and digestive system. *Asparagus racemosus* is utilized for threatened miscarriage, loss of libido, stomach ulcer, hyperacidity, bronchial infection and menopausal problems. Application of whole plant has given more positive results to cure rheumatism, brain complaints and diabetes milletus, as well as management of behavioral disorder and minimal brain dysfunction. It is an important plant of Dang region of Dholpur district.

### *Achyranthes aspera* Linn.

**Medicinal Properties** This plant is used by tribals as



emenagogue, laxative, antihelminthic, anti-arthritic, abortifacient, anti-fertility, aphrodisiac, anti-viral, antihypertensive, anticoagulant, anti-plasmodic, antitumor and diuretic. This plant is digestive, astringent, laxative, stomachic and purgative. Additionally, *Achyranthes aspera* is used in treatment of renal dropsy, diarrhoea, impotence, fever, cough, fistula, skin rash, scrofula and infection, nasal, chronic malaria, snake bites, asthma, and piles. Rheumatic pains, hemorrhoids, skin eruption, itches and boils can be cured by juice of this plant. Indigenous people also informed that the efficiency of herbal drugs can be raised by incorporation of *A. aspera*. To cure asthma, renal complications, scorpion bite, cold, cough, bronchitis, colic, debility, dog bite, ear complications, headache, leucoderma, pneumonia, skin diseases and snake bite etc., it is more effective.

### **Balanites aegyptiaca**

**Medicinal Properties** The bark of *Balanites aegyptiaca* is used in the treatment of round worm infection and syphilis. The infusion of root bark has been used by local people in haemorrhoid and diarrhoea. Bark is useful in the treatment of jaundice, syphilis, epilepsy, mental diseases, wounds, yellow fever and anthrax. The infusion of root acts as an antidote to snake bite. Skin diseases especially leucoderma, mouth ulcer, sleeping sickness, whooping cough can be cured by using its fruit part as a medicine. The aqueous extract of its fruit is useful to treat jaundice, as well as it has spermicidal property with-



out vaginal itching and hyperglycemic activity. Kernel of fruit is used as laxative, also acts as a vermifuge and an antidote to arrow poison. Kernel oil helps in curing skin disease. Seed part can be utilized as ointment, anti-microbial agent, laxatives, expectorant, magico-religious activity, anti-helminthic and febrifuge. Local people also informed that its seeds are effective to treat colic pain and cough. Several diseases such as tumors, epilepsy, skin boils, hemorrhoid, syphilis, aches, wounds, jaundice, spleen disorder, yellow fever, malaria and cold can also be prevented by using *Balanites aegyptiaca* seed oil. Shoot part is used to heal wounds and can be utilized as tooth brushes. Its thorns are significantly useful to cure leprosy. Malignant wounds and anthrax can be prevented by applying its leaf part. *Balanites aegyptiaca* leaves also have antihelminthic properties.



***Citrullus colocynthis* (L.) Schard.**

**Medicinal Properties** Roots of *Citrullus colocynthis* are applied by local people as a paste to treat abdominal swelling and rheumatism. Root is useful in rheumatism, given in abdominal enlargements, jaundice, ascites, urinary diseases and asthmatic attacks of children. The paste of roots/fruits is effective with or without combination of nux-vomica to treat pimples and boils. Fruits are used to reduce stomach ache, easy delivery hepatitis, snake poison and dropsy if given timely. According to indigenous people, its seeds have great beneficial effect in treatment of malaria, bowel complaints and blackness of grey hair. Whole plant is more helpful to cure various disorders like bronchitis, jaundice, joint pain, colic pain as well as common cold, diabetes, constipation, leprosy, asthma, cough, toothache, cancer, mastitis and wounds.

***Cissus quadrangularis***

**Medicinal Properties** *Cissus quadrangularis* is used in treatment of various diseases like leucorrhoea, venereal diseases, diarrhoea, dysentery, syphilis, gouts and piles. The entire plant has medicinal properties like hepatoprotective, gastroprotective, anti-ulcer, anti-osteoporosis, antioxidant, anti-obesity, bone healing, anti-inflammatory, analgesic, anti-osteoporotic, and antimicrobial, cholinergic properties. Metabolic diseases, hemorrhoids, bowel infections and obesity can be managed by using this plant as a drug. Whole plant is also effective for oral rehydration therapy according to the people. The juice of this plant stem is used to treat epistaxis, scurvy and menstrual diseases. Paste of its stem boiled with

lime water is widely used in asthma treatment. The roots and stems are most useful for healing of fracture of the bones. It is used in the treatment of digestive, tonic, anthelmintic, dyspeptic and irregular menstruation, asthma, analgesic and in eye and ear diseases.

***Dichrostachys cinerea* Linn.**

**Medicinal Properties** *Dichrostachys cinerea* leaves are purgative agent and pain killer. It is used in the treatment of fractures, boils, gout, diuretics, gonorrhoea, oedema, swellings, naso-pharyngeal infections and venereal disorders. Root powder is applied on scorpion stings and snakebites sites for fast relief. Root is astringent agent, thermogenic and anodyne. It has significant results on the treatment of digestive system, diuretic, inflammation, dyspepsia, joint pain, vesical calculi, constipation, elephantiasis, nephropathy, diarrhoea and arthralgia. Root infusion is used in relieving leprosy and syphilis coughs. It is also utilized in the form of laxative and anthelmintic. Tender shoots is used during inflammation of eyes. Bark is effective to cure leprosy, as laxative, in gonorrhoea, vermifuge, dysentery, arthritis, pulmonary diseases, toothache, pain, elephantiasis, syphilis, snake-bite, anthelmintic, diuretic and abortifacients. Its seed-pod is a pain killer and applied as antidotes on the sites of venomous sting bite.

***Lantana camara***

**Medicinal Properties** *Lantana camara* has numerous medicinal values. For instance its leaves are effective to be used as tonic, anti-bacterial, expectorant, anti-hypertensive, anti-tumoral agent and also used to cure cataract infections, cuts, rheumatism, chicken pox, swelling, high blood pressure, ataxy of abdominal viscera, eczema, measles, bilious fever, asthma, fevers, cancer, tumour, ulcers, sores, malaria and tetanus. Roots are helpful to treat skin rashes, rheumatism, malaria, stomachache of children and also



used as anthelmintic agent. Whole plant infusion utilized to cure bronchitis. People used *Lantana* oil for wounds healing and to treat itches and skin problems. Decoctions of this plant are externally applied on the sites of scabies and leprosy. Extract of *Lantana camara* is used to cure chicken pox, high blood pressure, malaria, asthma, cancers, cataract infections, tetanus, tumors, measles, bilious fevers, rheumatism, eczema, ulcers, skin itches and swellings. *Lantana* species is good agent of anti-spasmodic, diaphoretic, carminative and anti-septic.

#### *Lactuca serriola*



**Medicinal Properties** The *Lactuca serriola* plant has traditional medicinal uses, like laxative, hypnotic, antispasmodic, sedative, vasorelaxant, cough suppressant, antiseptic, expectorant, demulcent and diuretic. The milky sap becomes hard and dries upon coming in contact with air. Thus, it is effective to

improve several diseases such as gastrointestinal, bronchitis, pertussis, and asthma. The sap contains "Lactucarium" used in medicine for its medicinal properties, such as, diuretic, hypnotic, narcotic, and sedative, anodyne, antispasmodic and digestive properties. Hyperactivity in kids, insomnia, anxiety, neuroses, rheumatic pain, dry cough and whooping cough can be relieved by using this plant according to the local people. Seed oil is considered in hypnotic activity and as anti-pyretic.

#### *Momordica dioica*



**Medicinal Properties** *Momordica dioica* fruit is used as diuretic to cure, leprosy, purgative, asthma, inflammation, excessive salivation, snake bite, cardiac diseases, digestive problems, fever and mental disorders. It is considered as alexiteric, purgative, antivenom and stomachic. Freshly prepared fruit juice suppresses the hypertension. Fruit mixed with oil is used to cure diabetes mellitus. Tender fruits are applied on acne and pimples. Its seeds are effective to treat skin disease and eczema. Plant leaves are said to possess aphrodisiac and anti-helminthic activities, as well as helpful to use as remedy of asthma, mental disorders, digestive problem, jaundice, fever, bronchitis, urinary problems, bleeding piles, liver problems and disturbed bowel movements. Leaf is best medicine to cure skin problems. Its root part also has medicinal values such as anti-septic, astringent and stimulant. Leaf juice infusion with red sandal-wood, coconut, pepper etc. applied on head to cure headache.



*Pedalium murex*

**Medicinal Properties** *Pedalium murex* is a traditional medicine used to treat reproductive diseases especially in men, leucorrhoea and gonorrhoea of women, nocturnal emissions, gastro intestinal tract diseases and urinary tract diseases. Tribal people informed that leaves give more positive results for the treatment of bone fracture, ulcers, splenic enlargement dysuria and diarrhoea, as well as leaves decoction prevents diabetes mellitus. Aqueous solution of entire plant used as blood purifier, aphrodisiac, tonic, diuretic and improves bladder stone, appetite, urinary discharges, asthma, skin problem, cardiac diseases, cough, spermatorrhoea, leprosy, piles, vesicular calculi, pain, strangury, stomachic, emmenagogue, lumbago, impotency, more urination, appetizer and gleet. In addition it is also used to raise blood flow during menopause and effective for gargles in painful gums and mouth problems. The whole plant is given to treat diarrhoea, cold, stomachic, intestinal infections, headache, dysentery, cough etc.

*Tribulus terrestris*

**Medicinal Properties** *Tribulus terrestris* has several uses such as in urinary diseases, diuretic, hyperuricemia, tonic and aphrodisiac. It is also used to prevent kidney stone, reported in Unani. Infusion form of spiny fruits and whole plant are powerful to manage phosphaturia, spermatorrhea and genitourinary problems, including calculus affections, urinary disorders, gout, gonorrhoea, gleet, chronic cystitis, dysuria, cardiac diseases, gravel, cough and renal problems. Furthermore, tribal people also reported this plant to have aphrodisiac, diuretic, antiseptic, emenagogue, nervine tonic, alterative, demulcent, astringent analgesic and anti-inflammatory properties

**Discussion**

Tribal communities use many plant species ethnomedicinal and ethnoveterinary to treat various diseases. Most common diseases are cough, cold, allergy, cut, wounds, fever, diarrhea, fever, scorpion sting, toothache, body pain and abdominal disorders. The various mode of administration are as follows:

1. Raw plants/parts/products
2. Plant part made edible either by powdering, roasting, soaking
3. Ash of plants
4. Oils
5. Decoction
6. As tooth brush/ chewing
7. Tablets/ pills
8. Inhaling the fumes
9. Cooking as Vegetables
10. Poultice
11. Tying drug to body part
12. Extract by crushing or powder of fresh leaves.

Various parts of plants like root, stem, stem-bark, leaf, flower, seeds pods, gum, latex, bulb or whole plant are used to treat different ailments.

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