

Research Article

SOCIO–ECONOMIC IMPORTANT PLANTS OF KARAULI DISTRICT OF RAJASTHAN, INDIA

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ABSTRACT

Karauli district is situated in the south-eastern part of the state. The main river of district is Chambal. This district is a part of Dang region of the state. The main vegetation is tropical dry deciduous type. The present paper deals with 26 plant species belonging to 24 families which are intensively used by aboriginals and traditional communities of the Karauli district. The information collected is based on field observations carried out along with local inhabitants. Information on the ethnobotanical, medicinal and socio-cultural uses of plants was noted down and present here alphabetically with their botanical names, family and their uses.

Keywords: *Traditional, Medicine man, Primitive, Tribe*

INTRODUCTION

The need to conserve and reward traditional knowledge systems has been articulated in the publication titled “conserving indigenous knowledge integrating two systems of innovation” (UNDP, 1984).

Over 10000 years ago, women and men domesticated plants, thus giving rise to settled cultivation or agriculture. At that time, the population tribal people are the repository of accumulated experiences and traditional knowledge of their surrounding flora and fauna. Living close to environment aboriginals are good familiar with several wild plant and animals. By trial or error, they have screened and developed a highly specific knowledge of their surrounding flora and fauna.

Rajasthan has 70.97 lacs tribal population (fifth rank in India) forming 13.5% of state’s total population which is concentrated mainly in ten districts viz. Banswara, Udaipur, Dungarpur, Chhitorgarh, Pratapgarh, Baran, Karauli, Rajsamand and Sawai madhopur (Bhalla, 1999)

The main tribe of this area is Meena and traditional communities are Gurjar, Mali, Jogi and Kumhar etc. These are settled in different hilly and forest tracts of the district (fig. 1). These primitive groups subsist on their own primitive economy and strictly adhere to their social and cultural traditions even today. They use different floral elements to cure their different types of ailments. Their medicine man is locally known as *Bhopa*, *Ghothiya* or *Bhagat* (Sharma *et al* , 2007).

Vegetation types occur in this district is tropical dry deciduous type, forest dominated by *Anogeissus pendula* (Dhonk). The red sandy soil of the aravalli and vindhya system support the *Dhonk* which has amazing socio-economic value in life of tribal and traditional communities of the region. The area is dominated by two other species *Acacia catechu* and *Butea monosperma*, which are used by local resident for different purposes. Other plant species like *Acacia leucophloea*, *Lannea coromandelica*, *Bauhinia racemosa*, *Sterculia urens*, *Mitragyna parviflora*, *Syzygium heyneianum*, *Flacourtia indica*, *Grevia flavescens*, *Helicteris isora*, *Dichrostachys cineraria*, *Euphorbia neriifolia* are commonly found (fig. 2). Ravines of the district are dominated by *Salvadora oleoides*, *Acacia nilotica*, *Grevia tenax*, *Capparis seiparia* etc. main grasses of the area are *Aristida adscensionis*, *Apluda mutica*, *Themada quadrivalis*, *Chrysopogon fulvus*, *Heteropogon contortus*, *vetiveria ziznioides* , *Saccharum munja*, *Saccharum spontaneum* etc. (Sharma and Tiagi, 1979).

The area of knowledge which we today know as ethnobotany orientated with early mean when he searched for plants and animals suitable for his daily need. The word ethnobotany is only twelve decades old and modern systematic ethnobotany in India only six decades young. (Jain, 2013)



Figure 1: Inhabitant making a hut



Figure 2: Vegetation of the studied area

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Above mentioned groups are still live in remote areas and used local flora for their daily needs.

Research Article

A lot of work on ethnomedicines has been carried out in Rajasthan. Joshi (1995) gave an overview of the ethnomedicine of tribals of Rajasthan. Katewa and Jain (2006) reported 384 medicinal plant species used by the tribals of Rajasthan. Sinha (2000), Khandelwal (1998), Meena *et al.* (2003) documented ethnomedicinal plants of eastern Rajasthan.

MATERIALS AND METHODS

Extensive and intensive field surveys were conducted in the interior villages which were tuff to approach. Ethnobotanical information was collected based on methodology followed by Jain (1967, 1987, 1989) and Martin (1994).

The data were collected by interviews, observations and participations in their activities.

All the plant specimens were collected and herbarium sheets were prepared and deposited in Rajasthan University Botanical Library (RUBL). Plants identified with the help of Flora of Indian Desert (Bhandari, 1990), Flora of Rajasthan (Shetty and Singh, 1987-93), Flora of North- East Rajasthan (Sharma and Tiagi, 1979) and BSI (Botanical Survey of India), Jodhpur.

RESULTS AND DISCUSSION

Information thus collected from the tribal people included following plants:

1. *Abrus precatorius* L. (Fabaceae)

The leaves are chewed and masticated to cure mouthsores. Seeds burnt and fumes are inhaled by typhoid victim. The roots and twigs are used in cough. The necklace is also prepared by the seeds which is worn by children(fig. 3).



Figure 3: Seeds of *Abrus precatorius*

2. *Acacia catechu* (L. f.) Willd. (Mimosaceae)

The wood is used to make pestle. Gum is used as tonic. Fresh exude from stem is eaten by children. Katha is made from heartwood, which is applied locally to cure stomatis.

3. *Actinopterys radiate* (Swartz) Link (Actinopterydaceae)

Whole plant dipped in water for 12 hours is pounded with milk and taken to avoid nocturnal emission and also as tonic. Leaf juice is taken against acidity.

4. *Adhatoda zeylanica* Medic. (Acanthaceae)

The decoction of leaves is given orally to cure asthma and cough. Flower juice is dropped in nostrils against epistaxis. Leaves smeared with oil/ghee are warmed and tied locally to get relief from stomachache, body ache, sprain, muscular pain.

Research Article

5. *Aegle marmelos* (L.) Corr. (Rutaceae)

Leaf paste mixed in whey is taken to cure diarrhoea. Leaves are also chewed in diarrhoea. Root extract is taken orally to cure piles.

Root crushed with candy is eaten by women against protrusion of uterus.

The pulp of unripe fruits is cut into pieces, dried, powdered and one teaspoonful powder is taken twice a day to cure diarrhoea.

This is considered as a sacred tree. Leaves and fruits are offer to lord Shiva.

6. *Agave Americana* L. (Agavaceae)

The fibre obtained from leaves are used to make cordage.

7. *Bauhinia racemosa* Lam. (Caesalpiniaceae)

Paste of flowers is mixed with water to make drink that cures diarrhoea and dysentery. The fibre is obtained from young twigs, which is used for making ropes. Villagers used leaves for bidi making.

8. *Boerhavia diffusa* L. (Nyctaginaceae)

Leaves are used to make vegetable and curry with whey. Root paste is mixed with water and sugar. It is given orally to treat stomachache and vomiting. The root pounded with seeds of black pepper and candy is taken orally to cool body heat during summers. Crushed roots are boiled with cloves and thick paste is applied locally on boils and pimples. Extract of leaves, stem and roots is used to treat dropsy.

9. *Bombax ceiba* L. (Bombacaceae)

The fibre obtained from seeds are used for stuffing pillows. Young fruits are cooked as vegetable.

Powdered flowers mixed with honey are given in menorrhagia. The thorn is rubbed on stone with unboiled milk, made into paste and applied as ointment on the face to get rid from acne. Thorn is chewed with stem bark of *Cordia gharaf* to cure mouthsores.

The roots powdered with those of *Chlorophytum*, *Capparis sepiaria* and fruits of *Pedaliium murex* are taken with water as tonic to calm body heat. Root bark extract is given as tonic in case of sexual debility and also as nerve tonic.

Powdered gum is taken orally in diarrhoea, dysentery and diabetes.

Root powder mixed with sugarcandy and milk is taken to avoid impotency.

10. *Calotropis procera* (Ait.) Ait. f. (Asclepiadaceae)

Stem fibre is used for making string and ropes. The fibre from seed are also used for stuffing pillows.

The milky latex is applied to remove warts and unhealthy granulations from ulcers. Root bark is burnt and fumes are inhaled in malaria and typhoid. Bruised fresh root bark and leaves are mixed with cow urine and applied against wasp and scorpion sting, and to wounds caused by snakebite.

11. *Capparis decidua* (Forssk.) Edgew. (Capparaceae)

Unripe fruits are used to make pickle. Ripe fruits are eaten raw. The wood is used to make domestic articles. The juvenile leaves are chewed to relief from toothache.

12. *Cissampelos pareira* L. (Menispermaceae)

Root extract is taken orally to treat dyspepsia, pneumonia, bronchitis, diarrhoea and liver congestion.

13. *Citrullus colocynthis* L. Schrad. (Cucurbitaceae)

Crushed fruits are applied on footsores. The powder of fruit is mixed with sugarcandy and given as remedy for stomachache, diarrhoea and lose of appetite. The fruit is crushed with fruit of *Terminalia chebula* and applied locally on foot sores and eczema. Fruit is cut into pieces and mixed with dried ginger powder, salt and *harad* and put in an earthen pot for 10-12 days, after drying it is powdered and taken orally to avoid indigestion. A person walks keeping fruit in shoe till bitter taste develops in mouth, to cure heatstroke. Pulp of mature fruit is mixed with water and sugar and given orally to patients of constipation, fever and intestinal worms. Juice of fresh leaves is taken by jaundice patient. The fruit of *Terminalia chebula* is kept in the fruit of *Citrullus* overnight and taken in the morning to cure stomachache. The root is pounded on stone with water and 2-3 drops are put in the ears of children to relieve earache.

14. *Cocculus pendulus* (J.R. &G. Forst.) Diels. (Menispermaceae)

Powder of plant is taken with cow milk by tribal and traditional men and women in sexual debility.

Research Article

15. *Commiphora wightii* (Arn.) Bhandari (Burseraceae)

It is believed that fumes of gum ward off evil spirits.

The gum is to make *laddoos*, which are eaten to cure joint pain. Twigs are used as tooth brush.

16. *Corchorus depressus* (L.) Stocks (Tiliaceae)

The plant dried in shade is powdered and taken with candy and whey, due to cooling properties to calm body heat. Ladies take it to control bleeding in menorrhagia.

17. *Crinum defixum* Ker-Gawl (Amaryllidaceae)

Warmed 2-3 drops of leaf extract are put in ears to cure earache.

18. *Curcuma amada* Roxb. (Zingiberaceae)

The rhizome powder is boiled with oil or ghee and taken orally for relieving muscular pain. It is taken by women in debility.

19. *Desmostachya bipinnata* (L.) Stapf (Poaceae)

Whole plant is used to make string. The grass is kept with edible things at the time of lunar and solar eclipse. It is a belief that things will not be affected by the bad radiation. Leaves are also spread on bier to carry the dead body for funeral.

20. *Enicostema axillare* (Lam.) Raynal (Gentianaceae)

Leaves are taken with jaggery to cure malarial, seasonal fever.

21. *Indigofera tinctoria* L. (Fabaceae)

Root powder is given orally to cure dropsy.

22. *Momordica dioica* Roxb. ex Willd. (Cucurbitaceae)

Unripe fruits cooked as vegetable. Fruits are also used to make toys by the children.

Root of sterile plant is crushed with jaggery and milk and taken orally to check fertility forever.

23. *Oxalis corniculata* L. (Oxalidaceae)

Leaves are used to make chutney and as souring agent. Extract of leaves is taken to stimulate appetite.

24. *Sida cordifolia* L. (Malvaceae)

Stem fibre is used for making string. The decoction of roots with jiggery is used to get relief from fever. Root extract is given orally to treat pneumonia, bronchitis, liver congestion and to improve digestion. Root extract is mixed with cow ghee and given to pregnant lady whose labour sets in as oxytocic.



Figure 4: Twig and ripe fruits of *Ziziphus nummularia*

25. *Tamarix aphylla* (L.) Karst. (Tamaricaceae)

Tender twig is used as toothbrush against swollen gums. Decoction of leaves is used to gargle.

Research Article

26. *Ziziphus nummularia* (Burm. f.) Wt.&Arn. (Rhamnaceae)

Ripe fruits are eaten and sold in the market. Dried fruits are kept for future use. Twigs are used as fodder fig. 4). Root boiled in water and given for post natal treatment.

The paper provides the information on medicinal and other uses of 26 plant species used by the tribal and traditional communities of Karauli district. For medicinal purposes most of plants part used is fresh. They collect plant part near their vicinity for uses.

The ethnomedicinal informations provide basic information to initiate research to search for new compounds related to pharmacognosy, pharmacology and phytochemistry. These traditional medicine research help in the development of new formulations to cure certain diseases.

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