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ETHNOMEDICINAL PLANTS OF PALI DISTRICT OF RAJASTHAN USED IN HERBAL AND FOLK REMEDIES

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ABSTRACT

The Pali district a part of Thar Desert is very rich in herbal plant wealth. The herbal plants of this region have great potential to be used in drug and pharmaceutical industries. These herbal plants have been used by local people, tribal communities, vendors, native doctors such as Ojhas, Bhagats, Bhopas and experts of Ayurvedic fields since long time in herbal and folk remedies. Kalbelia, Nats, Bhils, Meena, Raika, Banjara, Gadolia-Lohar, Kathodia, Damor and Garasia communities of this district have a rich knowledge of plants based traditional medicines. Ethnomedicinal plants like *Bombax malabaricum* DC. Prodr., *Cassia tora* Linn., *Cissus quadrangularis* Linn., *Coccinia grandis* Linn., *Crateva magna* (Lour.) DC., *Ehretia aspera* Linn., *Indigofera cordifolia* Linn., *Launea procumbens* Linn., *Melilotus indica* Linn., *Pergularia daemia* (Forsk.) Chiov., *Lawsonia inermis* Linn. have been selected for this research work. The present investigation is aimed to create awareness about the ethnomedicinal value of the plants and their uses to draw the attention of pharmacologists, phytochemists and pharmaceuticals.

INTRODUCTION

Arid zone of Rajasthan is fortunately gifted with 628 species belonging to 352 genera and 87 families. About one-fourth of the total plants of the Indian Thar desert are useful for the welfare of human beings and domestic animals for food, fuel, fodder, medicine and other requirements.

The erratic rainfall and poor soil fertility have marked effect on the vegetation of the Indian desert.

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Despite the prevailing harsh climatic conditions, the Indian Thar desert comprises richest plant diversity among the other desert of the world. Kalbelia, Nats, Bhils, Meena, Raika, Banjara, Gadolia-Lohar, Kathodia, Damor and Garasia communities of Sirohi district of Rajasthan have a rich knowledge of plants based traditional medicines used in herbal and folk remedies. The Ethnomedicinal plants of this region have been studied for their medicinal uses in herbal and folk remedies by many workers [1-20].

OBSERVATIONS AND DISCUSSION

Some important ethnomedicinal plants are described here in brief with their botanical name, family, local name and medicinal uses.

1. *Bombax malabaricum* DC. Prodr.

Local Name : Semal, Heembal, Sanwal, Sanwar, Hemlo
Family : Bombacaceae
Ethnomedicinal aspects :

- Young root-tips are dried in shade and cooked as vegetable for the patients suffering from impotence by the tribals.
- The powder of dry flowers with honey is given to the Garasia ladies suffering excessive bleeding during menstruation.
- Garasia also take orally the extract of root-bark to cure guinea worm disease in Pali district.
- It is also considered as a good nerve tonic and aphrodisiac likes the extract of stem-bark.
- Kathodias apply warm poultice of stem bark against heart burn.
- The Bhils crush the fruits with local liquor or flowers with stem bark of *Alangium salvifolium* (Aankol) and give the juice orally to the ladies for retraction of uterus after child-birth.
- The tribals of Pali district believe that extract of flowers when taken orally is very effective in curing haematuria and leucorrhoea.

2. *Cassia tora* Linn.

Local Name : Puraira, Talka, Chakundra, Puadia, Punwad.
Family : Caesalpiniaceae
Ethnomedicinal aspects :

- The root-paste is applied as an antidote to snake-bite and scorpion-sting in pali district.
- Alcoholic extract of plant prepared by the Bhils in hilly tracts is used as an antibiotic to wash and cure the ringworm.
- Garasia in Pali district prepare a decoction of leaves and seeds to cure sandal spin disease.
- Extracts of fresh leaves is taken orally to reduce obesity by the tribals.
- Used in night blindness & skin diseases.
- Tea prepared from the seeds is taken to cure asthma and bronchitis whereas seed paste is applied locally as anthelmintic.
- Seeds are fermented with curd, and applied externally on abscesses, cuts wounds, boils and leprosy.
- Poultice of leaves and flowers is tied locally in scabies and rheumatism.
- Paste is prepared by mixing dried seed powder of *Cassia tora* (50 gm), dried young leaves of *Capparis decidua* (20 gm) and *Azadirachta indica* (10 gm) with fruit juice of *Citrus limon* (50 ml). This paste is applied locally by the tribals once a day for 15 days to cure eczema.
- Seeds curd and cow urine are mixed together and paste is prepared which is massaged over the body to cure itching by the tribals.
- On fourth cup extract of leaves is given thrice a day for three days to cure jaundice.

3. Cissus quadrangularis Linn.

Local Name : Hadjore, Asthisamhari, HadjoraJangli-Angoor.
Family : Vitaceae
Ethnomedicinal aspects :

- Extract of internode is given orally by tribals to the animals as well as human being for early cure of fractured bone.
- Extract of one internode is taken in single fracture.
- The stem juice of plant is used to treat scurvy, menstrual disorders oterrhoea and epistaseis.
- The paste of stem is given by tribals in asthma, burns and

woundes, bites of poisonous insects and for saddle sores of horses and camels.

- Leaves and young shoots with dry ginger and black pepper is given for body pain the influsion of plant is anthelmintic.
- The stem is useful in the treatment of gastritis constipation, eye diseases, piles and anemia.
- The plant is used by tribals in helminthiasis, anorexia dyspepsia, colic, flatulence, skin disease, leprosy, hemorrhage, epilepsy, convulsion, haemoptysis, tumors, chromic ulcers, swellings.

4. *Coccinia grandis* Linn.

Local Name : Gol, Golan, Golenda, Shiv-lingi, Tindori
Family : Cucurbitaceae
Ethnomedicinal aspects :

- Leaves are crushed and mixed with vegetable, which is consumed by the tribals to cure on skin diseases and syphilis.
- The poultice of inflorescence is tied locally on the body for the easy expulsion of guinea warm.
- The powder of whole plant is taken orally by the tribals to check blood sugar level in diabetes.

5. *Crateva magna* (Lour.) DC.

Local Name : Vaivana, Garlic pear tree, Neenathalam
Family : Capparaceae
Ethnomedicinal aspects :

- The leaves after putting in boiling water tied locally for easy expulsion of guinea worm.
- Half tea spoon powdered bark is taken with water in stomachache, constipation and other gastric problems.
- Root, leaves and skin of the bark are used for edema, cervical rheumatism and spleen enlargement.
- The bark acts as an appetizer, laxactive, anti- inflam matory.
- To use orally in Kidney stone and abortion.

6. *Ehretia aspera* Linn.

Local Name : Tambolanlune
Family : Convolulaceae
Ethnomedicinal aspects :

- The paste of stem-bark is used as an ointment for burns by the Bhils and Kathodias.
- The bark of various plants (*Ehretia aspera, Butea monosperma, Terminalia bellirtia, Mangifera indica, Launea coromandelica and Ziziphus rugosa*) is ground in equal amount and the decoction prepared from the mixture is given to children twice a day for two days in dysentery and diarrhea.
- The extract of fruit or fruit pulp is given orally in indigestion, constipation and gastric problems.
- Leaves are chewed orally to cure mouth blister.
- Leaf powder (250 gm.) is mixed with 250 gm sugar and divided it in 10 equal doses. Each dose is taken daily orally along with 250 gm curd made from goat milk to cure dysuria.
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7. *Indigofera cordifolia* Linn.

Local Name : Bekario, Bekar, Kakad,
Family : Fabaceae
Ethnomedicinal aspects :

- The leaves are chewed by Bhil and Garasia tribal to cure swollen gums.
- The Tribals of Pali district takes about one cupful decoction of seed powder and leaves to cure throat congestion.

- Decoction of whole plant is taken once a day for 7 days to cure jaundice and cirrhosis while inhalation of smoke is considered beneficial by the tribals in rhinitis.

8. *Launea procumbens* Linn.

Local Name : Jangligobi, Van-gobi, Roorhadi
Family : Asteraceae
Ethnomedicinal aspects :

- The paste of leaves is applied locally to cure piles while leaf extract is taken orally by the tribals in acute dysentery.
- Bhils and Damors apply the paste of the plant on the teats of their cattle to cure inflammation.

9. *Melilotus indica* Linn.

Local Name : Ameda, Morila, Sweet clover
Family : Fabaceae
Ethnomedicinal aspects :

- Leaves are rubbed on the skin by the Garasia tribals to cure itching whereas paste of leaves along with lemon juice is applied on skin for early cure to skin eruptions.
- The decoction of whole plant is taken orally to cure bodyache.

10. *Pergularia daemia* Linn.

Local Name : Gadariari Bel, MendaSingi, Akadi, Dudhi
Family : Asclepiadaceae
Ethnomedicinal aspects :

- The Bhil, Damor and Garasia tribals apply the paste of young leaves on the swellings due to guinea-worms.
- Bhil and Damors consider leaf-juice to be very effective in heart burn and urinary obstruction when taken orally.
- The local vaids prescribe the leaf juice as an expectorant and to cure asthma and rheumatism.
- The root-bark produces a stimulating effect on the smooth muscles of the intestine resulting in the increase of acid in the gastric juice.
- The root bark also produces profound effect on involuntary muscles raising blood pressure.
- Crushed pods are given to domestic animals such as cows, goats and sheep for ouster induction and to cure "foot and mouth" disease.
- Decoction of leaves is given to cow to cure fever by the tribals.

11. *Lawsonia inermis* Linn.

Local Name : Mehandi, Henna
Family : Lythraceae
Ethnomedicinal aspects :

- The Bhil apply the paste of fresh leaves on the eyes to cure conjunctivitis and locally on pimples and boils etc.
- They also use the decoction of plant orally to cure cough and vomiting.
- The Garasia tribals apply warmed leaves on the swellings.
- One tea spoon leaf powder is taken orally in sunstroke by the tribals.
- The paste of leaves is applied externally on head and feet to cure nostril haemorrhage and burning sensation.

CONCLUSION

The arid region of Rajasthan is rich in ethnomedicinal plants wealth. Tribal communities of this region have been using these plants for herbal and folk remedies since long. There is an urgent need to create great awareness amongst the population as a whole particularly the farmers about the medicinal and economic values of these plants, so that is heritage may be wisely used and exploited and at the same time conserved and perpetuated through judicious management for future generations. This would ensure protection and conservation of valuable germplasm of ethnomedicinal plants.

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CONFLICT OF INTEREST:

The authors declare that they have no conflict of interest.

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