

# Plants Used In Ethno-Veterinary Medicines by Tribal Peoples in Betul District, Madhya Pradesh, India

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## ABSTRACT

The paper highlights some commonly used ethnoveterinary medicines for domestic animals to treat ailment. The data was gathered from ethnic people specially Gond and Korku in the tribal pockets of Betul district. A total 24 species belonging to 24 genera, representing to 14 families as employed for 24 types of animal diseases. The species, family and vernacular name, plant part (s), drug preparation, mode of administration are studied.

**Key Words:** Folk Ethnoveterinary medicines, Traditional knowledge, 24 plants, Betul District, Madhya Pradesh, India

## 1. Introduction

The ethno veterinary practices all over the world within the ethnic groups and cultural societies are an integral component of livestock healthcare and management practices. It is possible that the same traditional healers prescribe medicines for both human beings and animals but some specialized men treat animals only <sup>[1]</sup> (Dwivedi 1998). Many medicinal plants grow in India, in plains and hills are most commonly used ingredients in the preparation of ethno veterinary medicines. It is developed by farmers in field and barns rather than in scientific laboratories and it is also less systematic, less formalized and usually transferred by word of mouth rather than writing.

In most rural areas people prefer to treat their animals with indigenous drugs. At present over 35,000 plants are known to have healing properties (Jain 1991). All parts of the plants, including leaves, bark, fruits, flowers, seeds are used in medicinal preparation (McCorkle, 1996). Ethno veterinary practices are often cheap, safe, time tested and based on local resources and strengths. These can provide useful alternatives to conventional animal health care <sup>[4]</sup> (Katewa, S.S. and *et al.* 2000). Ethno veterinary medicine is in danger of extinction because of advancement of the modern veterinary medicine.

The importance of the traditional knowledge on ethno veterinary practices by specialists and local healers who are knowledge and experienced in traditional systems of treatment, but their knowledge is not documented, and is dwindling fast <sup>[5]</sup> (Jain, 2000). As the local healers did not document their knowledge and experience, and did not pass it on to others readily, there was danger of extinction of knowledge <sup>[6]</sup> (Mathais and Anjaria, 1998). Both conventional and participatory methods have been used to document local knowledge in general and ethno veterinary medicine in particular. Both approaches have their place and their results can be complementary and possibly cross-valid at each other <sup>[6]</sup> (Anjaria Jayvir, 1996).

## 2. Methodology

The district Betul lies between 21° 55' and 21° 1.92' North latitudes and 77° 54' and 77.9° East longitudes in Madhya Pradesh and includes rich in biodiversity and tribal population. It extends to an area of about 4056.397 sq. km.

Several field visits were conducted to tribal villages and rural areas in Betul district where Gond and Korku dominate the population to collect information on ethno veterinary medicines practiced by them. The plant species were identified taxonomically by consulting the Flora. The voucher specimens were deposited in the herbarium of Department of Botany, Bhartiya Mahavidyalaya, Amravati. The table in the appendix gives an overview of ethno veterinary practices of the study area.

## 3. Results And Discussion

The traditional knowledge of tribal communities in Betul district has high ethno botanical importance. They utilize numerous plants and their various parts viz., roots, leaves, stems and rhizome for various ethno veterinary practices. During the field survey, ethno veterinary data of 25 species of plants belonging to 19 families have been collected. Both internal and external applications were involved in the treatment of ailments.

While analyzing the information on the plants used by tribals for treating the ailments of animals, it has been noted that leaf is the most commonly used plant part, followed by stem bark, fruit, rhizome, root & seed. It is interesting to note that major ethnoveterinary medicine used for the treatments of diarrhoea and fractures, dysentery, foot and mouth disease, wound, yoke sores, galactagogue and lactation are studied in following plants.

### *Barleria prionitis* L.

Plate No. 17,		Fig. No. 67
Vernacular name	-	Kate Koranti (M)
Locality	-	Uttamsagar
Habitat	-	Common in the forest undergrowth and in waste places.
Flowers	-	September
Fruits	-	March
Voucher Specimen No.	:	510/BMV/160
Parts used	-	Leaves
Mode of administration- The leaves decoction is mixed with water and given to treat diarrhoea in cattles.		

### *Andrographis paniculata* (Burm. f.) Wall. ex Nees

Plate No. 17,		Fig. No. 68.
Vernacular name	-	Bhuinimba (M), Kiryat, Olenkirayat (H)

Locality - Nimiya forest  
 Habitat - Rare in forest  
 Flowers - August-September  
 Fruits - February-March  
 Voucher Specimen No. : 510/BMV/161  
 Parts used - Stem, Leaves

Mode of administration - Decoction of whole plant is mixed with pulp juice of Tamarind fruits and given to the cattles against diarrhoea.

***Justica adhatoda* L.**

Plate No. 17, Fig. No. 69.

Vernacular name - Adulsa(M)  
 Locality - Uttamsagar  
 Habitat - Common in the forest undergrowth and in waste places.  
 Flowers - August  
 Fruits - December  
 Voucher Specimen No. : 510/BMV/162  
 Parts used - Leaves

Mode of administration - A fine paste of leaves, stem bark, garlic and asafoetida is given thrice a day for healing banded areas. Decoction of leaves is given to treat fever.

***Premna obtusifolia* R.Br.**

Plate No. 17, Fig. No. 70.

Vernacular name - Mar-vel (K)  
 Locality - Fokalya forest  
 Habitat - Very rare, found on bank of Lake.  
 Flowers & Fruits - July- September  
 Voucher Specimen No. : 510/BMV/163  
 Parts used - Leaves

Mode of administration - Leaves juice is applied externally on the wound to kill the germs.

***Clerodendrum inerme* (L.) Gaertn**

Plate No. 17, Fig. No. 71.

Vernacular name - Talkal (K), Arni (G)  
 Locality - Gonapur  
 Habitat - Throughout the plains in hedges and along banks of nalas.  
 Flowers - October  
 Fruits - December  
 Voucher Specimen No. : 510/BMV/164  
 Parts used - Leaves

Mode of administration - Decoction of leaves dropped on worm infested wounds and paste of crushed leaves are also applied to kill worms.

***Vitex negundo* L.**

Plate No. 17, Fig. No. 72.

Vernacular name - Nirgundi (G), Sambhalu (B)  
 Locality - Gonapur

Habitat - On waste land, along road side.

Flowers - July-February  
 Fruits - Cold season  
 Voucher Specimen No. : 510/BMV/ 165  
 Parts used - Leaves

Mode of administration - The warmed leaves are tied on swelling part of the legs of cattles. Warmed leaves are also tied to the fractured parts of cattles in bone fracture. 25-30 drops of juice extracted from leaves of this plants is poured into ears of animals against snakebite as an antidote.

***Lavandula bipinnata* (Roth.) O. Ktze. Rev.**

Plate No. 18, Fig. No. 73.

Vernacular name - Bhutmanjri (K)  
 Locality - Uttamsagar forest  
 Habitat - Throughout in forest undergrowth, on bunds of fields.  
 Flowers - September  
 Fruits - January  
 Voucher Specimen No. : 510/BMV/166  
 Parts used - Leaves

Mode of administration - Crushed leaves of this plant with leaves of *Ixora pavetta* Roxb. are fed to the cattles for secretion of milk.

***Dendrophthoe falcata* (L.f.) Etting in Denkschr.**

Plate No. 18, Fig. No. 74.

Vernacular name - Dhawada bandha (K), Banda (H), Vanda (M)  
 Locality - Nimiya forest  
 Habitat - Common parasite on tree.  
 Flowers & Fruits - December-June  
 Voucher Specimen No. : 510/BMV/ 167  
 Parts used - Leaves

Mode of administration - Leaves paste is tied on fracture part of cattles against bone fracture.

***Santalum album* L.**

Plate No. 18, Fig. No. 75.

Vernacular name - Chandan(M), Safed Chandan(H)  
 Locality - Mallarghat  
 Habitat - Common along bunds of fields, wild as well cultivated.  
 Flowers & Fruits - February – November  
 Voucher Specimen No. : 510/BMV/168  
 Parts used - Leaves, Bark oil  
 Mode of administration - Oil obtained from sandalwood mixed with camphor and given to the cattles against peptic ulcer.

***Synadenium grantii* Hook.**

Plate No. 18, Fig. No. 76.

Vernacular name - Thora(H)  
 Locality - Gonapur

Habitat - Grown in hedges.  
 Flowers & Fruits - November-January  
 Voucher Specimen No. : 510/BMV/169  
 Parts used - Stem Bark  
 Mode of administration - Stem bark powder is mixed with edible oil and applied on swelling of joints in cattles.

***Mallotus philippensis* (Lam.) Muell-Arg.**

Plate No. 18, Fig. No. 77.

Vernacular name - Shendri (H)  
 Locality - Uttamsagar forest  
 Habitat - Common on Hill slopes.  
 Flowers & Fruits - November- February  
 Voucher Specimen No. : 510/BMV/170  
 Parts used - Leaves  
 Mode of administration - Juice extracted from the leaves is given for expulsion of ringworms in cattles.

***Phyllanthus amarus* Schum & Thonn.**

Plate No. 18, Fig. No. 78.

Vernacular name - Bhui Awala(M)  
 Locality - Sahapur forest  
 Habitat - Common on hill slopes.  
 Flowers & Fruits - July-December  
 Voucher Specimen No. : 510/BMV/171  
 Parts used - Leaves, Fruit  
 Mode of administration - Fruits powder is crushed with leaves of *Ocimum basillicum* and honey. This mixture is fed to the cattle against anthrax.

***Emblica officinalis* Gaertn.**

Plate No. 19, Fig. No. 79.

Vernacular name - Awala(K)  
 Locality - Uttamsagar forest  
 Habitat - Frequent in forest.  
 Flowers & Fruits - July- December  
 Voucher Specimen No. : 510/BMV/172  
 Parts used - Bark  
 Mode of administration - The stem bark paste is applied on wounds of animals for rapid healing.

***Eulophia nuda* Lindl. in Wall.**

Plate No. 19, Fig. No. 80.

Vernacular name - Amarkand (M)  
 Locality - Nimiya forest  
 Habitat - Frequent in grasses on hill slopes.  
 Flowers & Fruits - April- September  
 Voucher Specimen No. : 510/BMV/173  
 Parts used - Tubers  
 Mode of administration - Fresh tubers about 100 gm is crushed with 100 gm young shoots of *Solanum nigrum* L. and

paste is prepared. This paste is applied externally in cattles against tumour.

***Costus speciosus* (Koen.) J.E. Smith.**

Plate No. 19, Fig. No. 81.

Vernacular name - Nalguj (K), Wild zinger (H)  
 Locality - Foklya forest  
 Habitat - Occasional on hill slopes.  
 Flowers - September  
 Fruits - October  
 Voucher Specimen No. : 510/BMV/174  
 Parts used - Rhizome  
 Mode of administration - Leaves are warmed and tied against inflammation in legs of the cattles. Rhizome is crushed to prepare a paste and applied externally to cure wounds.

***Curcuma longa* L.**

Plate No. 19, Fig. No. 82.

Vernacular names - Haladi (M)  
 Locality - Uttamsagar  
 Habitat - Commonly cultivated on large scale in fields.  
 Flowers - July  
 Fruits - Not Seen  
 Voucher Specimen No. : 510/BMV/175  
 Parts used - Rhizome, leaf  
 Mode of administration - Paste of rhizome with equal amount of seeds of black gram and leaves of bamboo are fed to the cattles against bloody dysentery.

***Curcuma pseudomontana* Grah.**

Plate No. 19, Fig. No. 83.

Vernacular names - Ran halad (H)  
 Locality - Uttamsagar  
 Habitat - Along stream banks.  
 Flowers - July  
 Fruits - September  
 Voucher Specimen No. : 510/BMV/176  
 Parts used - Leaves  
 Mode of administration- Leaves decoction is mixed with salt and given to the animals against tymphany till cure.

***Musa rosacea* Jacq.**

Plate No.19, Fig. No. 84.

Vernacular name - Jangali Kela (H)  
 Locality - Fokalya forest  
 Habitat - Occasional on rocky hill slopes.  
 Flowers - October  
 Fruits - March  
 Voucher Specimen No. : 510/BMV/177  
 Parts used - Bulb

Mode of administration

Bulb is crushed and fed to the cattles against dysentery.

***Curculigo orchioides* Gaertn.**

Plate No. 20, Fig. No. 85.

Vernacular name - Kali musali (H)  
 Locality - Uttamsagar forest  
 Habitat - Occasional on hill slopes, under the bushes, in deciduous forests.  
 Flowers - July  
 Fruits - September  
 Voucher Specimen No. : 510/BMV/178  
 Parts used - Root stock

Mode of administration - Root stock is rubbed in cow urine and applied to injury caused by scorpion sting. Dried root stock powder is applied to magotted wounds of animals.

***Dioscorea bulbifera* L.**

Plate No. 20, Fig. No. 86.

Vernacular name - Kuli Kand (H)  
 Locality - Prabhat Pattan forest  
 Habitat - Among bushes, in hilly forest.  
 Flowers - August-September  
 Fruits - October- November  
 Voucher Specimen No. : 510/BMV/179  
 Parts used - Tubers

Mode of administration - The tuber paste is externally applied for cleaning maggot- infested wounds of animals.

***Asparagus racemosus* Willd.**

Plate No. 20, Fig. No. 87.

Vernacular name - Shatavari (G), Sahastramuli (K)  
 Locality - Nimiya forest  
 Habitat - Common in forest undergrowth on hill slopes and hedges.  
 Flowers - July-August  
 Fruits - December-January  
 Voucher Specimen No. : 510/BMV/180  
 Parts used - Tuberous roots

Mode of administration- Roots are ground to prepare a powder is mixed with water and given to milching animals for increase in flow of milk. When milching animals stop milking, roots along with cotton seeds are fed to the animals to promote secretion of milk.

***Gloriosa superba* L.**

Plate No. 20, Fig. No. 88.

Vernacular name - Kal-lavi (M), Zagdya (K)  
 Locality - Ghat Biroli  
 Habitat - Occasional along nallahs among bushes.  
 Flowers - August  
 Fruits - November  
 Voucher Specimen No. : 510/BMV/181  
 Parts used - Roots, Leaves

Mode of administration - Root stock is rubbed and applied to swelling part of neck in cattles. Dried root powder is dusted on maggotted wounds to kill worms. Paste of roots is applied on tumors. The root paste is applied on uterus to treat slipping down of uterus. Root paste is applied in eyes as an antidote against snake bite. The root along with jawar bread is fed to animals to get relief from fever.

***Chlorophytum borivilianum* Sant. & Fern.**

Plate No. 20, Fig. No. 89.

Vernacular name - Safed musali (M)  
 Locality - Nimiya forest  
 Habitat - Very rare in forest, monsoon herb on rocky.  
 Flowers - July- August  
 Fruits - September- October  
 Voucher Specimen No. : 510/BMV/182  
 Parts used - Tubers

Mode of administration - 50 gms of powder from dried tubers is mixed with about 250 ml coconut milk and given once a day for two to three months for healthy growth of animals.

***Amorphophallus bulbifer* (Roxb.) Bl.**

Plate No. 20, Fig. No. 90.

Vernacular name - Jangli Suran(G), Bhahna Kand(K)  
 Locality - Nimiya forest  
 Habitat - Frequent along forest borders.  
 Flowers & Fruits - April- July  
 Voucher Specimen No. : 510/BMV/183  
 Parts used - Corm

Mode of administration - The decoction of corm is given to the animals twice a day for seven days against lam or in severe body pain.



#### 4. Conclusion

Animals and plants are integral part of tribal culture, religion, magico-religion and traditional pharmacopeia. Traditional practices still remain prevalent in villages. This is a clear indication of their faith in the folk medicine. But in the process of modernization, this knowledge is vanishing very rapidly. Advanced research on plants of excessive medicinal values may lead to new sources of drugs.

The tribal population still depends on wild resources for their daily needs. Notwithstanding the emergence of modern means of transport, food production, artificial or synthetic

substitute for leather and other animal products, animals continue to play an important role in human life. Hence animal health care will continue to attract attention of man. Conservation and sustainable utilization of potential medicinal plants is essential for the coming generation.

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