

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^[1] (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^[4] (Kategwa, 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^[5] (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^[6] (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^[6] (Anjaria Jayvir, 1996).

2. Methodology

The district Betul lies between 21° 55' and 21° 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	-	Nimiy 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.	

***Justicia 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-Febuary
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 <i>Ixora pavetta</i> 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	-	Nimiy 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 <i>Ocimum basilicum</i> and honey. This mixture is fed to the cattle against anthrax.	

***Emblia 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 <i>Solanum nigrum</i> 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 tympany 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 orchoides* Gaertn.**

Plate No. 20,
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 maggot wounds of animals.

***Dioscorea bulbifera* L.**

Plate No. 20,
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,
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,
88.

Vernacular name	-	Kal-lavi (M), Zagdya (K)
Locality	-	Ghat Biroli
Habitat	-	Occasional along nullahs 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 maggoted 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,
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,
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.

Fig. 67
Harlechia prisotis L.Fig. 68
Andrographis paniculata (Burm.f.) Wall. ex NeesFig. 73
Lasiandra bipinnata (Roth) O.Ktze.Fig. 74
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Musa rotundifolia Jacq.Fig. 89
Chlorophytum burvillianum Sant. & Fern.Fig. 90
Amorphophallus bulbifer (Roxb.) Bl

4. Conclusion

Animals and plants are integral part of tribal culture, religion, magico-religion and traditional pharmacopoeia. 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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