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A Survey Report on Ethno-Veterinary Plants of Shakambhari Mata Hills of District Sikar of Rajasthan

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ABSTRACT
A botanical survey of Ethno-veterinary as well as Ethnomedicinal plants found in the arid and semi- arid regions of Shakambhari mata hills of Sikar district was conducted. The local and rural people of the area use these plant species in day to day for cure of many cattle, livestock diseases. The information was collected based on the filed work of study area and interviews with local and rural ethnic people practicing indigenous Ethno-veterinary medicines. During the survey 15 Ethno-veterinary plant species belonging to 11 Families were recorded from the study area.

Keywords: Animal husbandry, ethno-veterinary practices, Traditional, Herbs, Shakambhari mata hills.

INTRODUCTION

Traditional medicines, especially the Ethno-veterinary medicines have recently been receiving heightened interest of the all over the world. They enjoys a respectable position today, especially in the developing countries, where modern health service of cattle is limited. Safe, effective and inexpensive indigenous remedies are gaining popularity among the ethnic traditional holder people of both urban and rural areas, especially in India and China. Presently, Ethno-veterinary medicinal plants are most important and more valued for their chemical composition and so their demand in the market has increased many times in all over the world. Livestock industry provides for a major source of livelihood for many people worldwide, particularly the rural poor in developing countries. Health is a major constraint to livestock production and development in rural and peri-urban communities where a half of the world's livestock population is found.

It is an age – old system of health care practiced by primitive people living in remote villages and forests. Information from rural ethnic groups on indigenous traditional Ethno-veterinary medicine as well as herbal medicine had always played a important vital role in the discovery of novel products from plants as chemotherapeutic agents. Herbal medicines, ethno-veterinary and herbs are a major elements in

Ayurveda, Veda, Homeopathic Ethno-veterinary system of medicine and oriented towards traditional knowledge.

STUDY AREA AND METHODS

Sikar is one of the three districts of Shekhawati region of Rajasthan state of India which is spans the north latitudes of 27°07′ and 28°12′ and the east longitudes of 74°41′ and 76°05′ in Rajasthan State's north eastern region. Covered by Survey of India degree sheet nos. 45I, 45M, 54A, 44P, and 44L, it has an area of 7732 sq. km., or roughly the shape of a crescent, and makes up 2.25 percent of the state's total area. It is bordered on the north by the districts of Churu and Jhunjhunu in Rajasthan state, the west by the districts of Churu and Nagaur, and the south by the district of Jaipur in Rajasthan state. On the west are the districts of Mahendergarh in Haryana state. Present study focuses on region Shakambhari mata hills of Shekhawati region of Rajasthan. The Aravalli range includes the hilly region. The district is divided almost exactly in half east-west by a range of hills that run through Sakambrai Mata Ji, which is located east of Sikar. The topography of the western portion is characteristic of the desert. The tallest peak is around 1052 meters above sea level, and the other hills are typically between 350 and 700 meters above sea level. Typically, the plain region is situated between 380 and 530 meters above sea level. The landscape in the northwest slopes westward. Within the district's hill system, the hill peaks that have reached a significant height are located in Sikar tehsil at Raghunathgarh, Harsh, Deogarh, and Shyamgarh.

The district's center region can be referred to as a watershed, with rivers and streams flowing eastward toward east, southward toward south, and northward toward north. The district does not have a perennial river. There are 26,77,333 people living in these districts overall. (According to the 11^{th} census). The Mendha, Kantli, Dohan, Krishnawati, and Sabi rivers are the most significant waterways in the district. The Mendha River, which flows through the tehsils of Sri madhopur and Danta ramgarh, joins the Sambhar Lake. Kantli begins in Sri Madhopur tehsil near Khandela and flows northeasterly out of the district into district Jhunjhunu. The Dohan River traverses a tiny piece of the district in its upper north eastern region. The Krishnawati River rises in the hills to the southeast of Neem ka thana and empties into the northeastern portion of the district. Only the tehsil of Neem Ka Thana has Sabi River flow. There is very little surface drainage in the western desertic plain. In addition to this, there are a few smaller streams, known as nallahs, that emerge from the hills, run a short distance, and then dry up in the sandy area. To the east of the district, close to Pritampuri, lies a natural lake.

During the course of present study, the undertaken work can be alienated into the following stages- field survey to document EVP, literature survey, herbaria survey and herbarium study.

Ethno-veterinary surveys were conducted repeatedly in diverse periods of the study area of Rajasthan from the last 7 month. Earlier really initiation into the ground work; the report was recognized with many persons rather than the main, supervision required and contact was then reputable with other tribals/rural peoples of the zone. The ability to communicate effectively in language as well as personality and social status, are essential for building rapport between the parties. The village headman, priests, other community leaders, men and women labouring in the fields, and medicine men were among the local informants. During the fieldwork, several people were interviewed.

Fig. 1: Map of study area (Sikar district)

Fig. 2: Photos with rural people of study area during filed work of study area

Collection of Plant species | **Adahatoda vasica** | **Mukesh Yogi Prepare of traditional medicines for animals** | **Collection of leaves and bark of different plants**

Fig. 3: Photos with sample collection

RESULTS AND DISCUSSION

Livestock health is a major problem facing farmers throughout India as well as Rajasthan and Shekhawati region. Veterinarians are few in remote areas and the cost of modern treatment is expensive, inaccessible and sometimes inappropriate because it is not sustainable in the prevailing socioeconomic conditions. The situation has seen the rise and application of indigenous and traditional livestock treatment practices as the most important immediate solution.

Ethno-veterinary knowledge (it is also called as veterinary anthropology) deals with folk beliefs, knowledge, skills, methods and practices pertaining to the health care of animals. Ethno-veterinary knowledge is part of indigenous knowledge and as an integral part of traditional knowledge it forms part of ethnic community cultural heritage. Ethno-veterinary medicine can make an important contribution to improve the veterinary health care infrastructure in India and increase the productivity of Indian livestock. The commonly occurring cattle ailments encountered in the study area is presented in table 1.

Table 1. Popularly occurring cattle ailments in the study area

Sr. No.	Local name of diseases	English name of diseases
1.	Muha aana	Mouth rot
2.	Banzpan	Infertility
3.	Garbha paat	Habitual abortion
4.	Gobar mein khun aana	Dysentery
5.	Ankho ka jharna	Conjunctivitis
6.	Thanela rog	Mastitis
7.	Jer ka rukna	Retention of placenta
8.	Aafra	Bloat
9.	Kanta	Prolapse of uterus
10.	Sua rog	Milk fever

The present work on alternative medicine related to our age- old heritage of traditional veterinary practices will eventually help millions of farmers for treating large number of common animal diseases. It will thoroughly contribute in livestock production and overall rural as well as urban development. It is time now to supplement, our validated traditional knowledge and present this great contribution to the nation, and train our veterinarians and herbalists/ healers to preserve and harness nature in services of the rural masses and the mute animals, by developing cheap, tested, potent, easily available herbal remedies to be in the service of animal/ cattle health and good production of animal products like- milk, butter etc.

The detailed description of these plants, their use and method of medicine preparation and administration is presented in table 2.

Table 2. detailed description of ethno-veterinary plants, their use and method of medicine preparation and administration

S.no	Botanical Name of plant	Family	Local name	parts used	Disease / Cure
1.	*Abrus precatorius*	Fabaceae	Chirmi,	Seeds	Fever
2.	*Acacia leucophloea*	Mimosaceae	Ronz, Khairi	Leaves, Flowers	Induce labour pain
3.	*Acacia nilotica*	Mimosaceae	Babool, Kikar.	Bark and Thorns	Retention of placenta
4.	*Adhatoda vasiaca*	Acanthaceae	Adusa, Aduaa	Leaves	Fever
5.	*Azadirachta indica*	Meliaceae	Neem	Leaves	Tick control
6.	*Calotropis procera*	Asclepiadaceae	Aak, Akada	Latex, Leaves	Rot in hooves Wound healing
7.	*Datura innoxia*	Solanaceae	Dhatura	Whole plant	Mastitis
8.	*Leptadenia pyrotechnica*	Asclepiadaceae	Kheenp	Whole plant	Stomach disorder
9.	*Rhus mysorensis*	Anacardiaceae	Dansara	Fruit	Constipation
10.	*Tridax procumbens*	Asteraceae	Lardeolapsi	Leaves	Diarrhoea
11.	*Tecomella undulata*	Bignoniaceae	Rohida	Bark	Skin infection
12.	*Tephrosia purpuria*	Fabaceae	Dhamaso	Roots	Rheumatism & swelling
13.	*Wrightia tinctoria*	Apocynaceae	Kheer	Bark	Diarrhoea
14.	*Withania somnifera*	Solanaceae	Padalsi	Whole plants	Gastrointestinal disorders
15.	*Zizyphus nummularia*	Rhamnaceae	Jhar-bor	Thorns	Retention of placenta

The present study reveals that the Shakambhari mata hills region of Sikar district of Rajasthan has a rich floral diversity with significant ethno-veterinary potential. Despite socio-cultural changes, the local rural populations still possess traditional knowledge of plants for ethno-veterinary purposes. An efficient management plan for extracting medicinal resources will aid in sustaining both the regional flora and the rural communities.

REFERENCES

1. Abhishek, D., Kanwaljeet, S., Bikarma, (2021). Exploring traditional veterinary practices from Gujjar and Bakarwal tribes of District Poonch, Jammu & Kashmir: *A boon for animals from our ancestors.* doi:10.21203/rs.3.rs-255153/v1.
2. Adekunmi, A. O., Ajiboye, A., Awoyemi, A. O., (2020). Assessment of ethno-veterinary management practices among sheep and goat farmers in Southwest Nigeria. *Annual Research and Review in Biology*, 35, 42–51. doi:10.9734/arrb/2020/v35i330199
3. Banda, L. J., & Tanganyika, J. (2021). Livestock provide more than food in smallholder production systems of developing countries. *Animal Frontiers, 11*, 7–14. https://doi.org/10.1093/af/vfab001.
4. Chand, S., Meena, B. S., Yadav, S., (2021). Ethno-veterinary practices followed by farmers for treatment of reproductive disorders in dairy animals. *International Journal of Livestock Research, 11*(6), 65-70. https://dx.doi.org/ 10.5455/ijlr.2021022 4103006.
5. Jain, S. K. (1991). *Dictionary of Indian Folkmedicine and Ethnobotany*. Deep Publications.
6. Jain, S. K., & Sumita, S. (1999). *Dictionary of ethnoveterinary plants of India*. Deep publications.
7. Jain, S. K. (2003). Ethnoveterinary recipes in India: A botanical analysis. *Ethnobotany, 15*, 23-33.
8. Kalyan, M. S., & Habibur, R. C. (2022). Inventorization and consensus analysis of ethnoveterinary medicinal knowledge among the local people in Eastern India: Perception, cultural significance, and resilience. *Frontiers in Pharmacology*. https://doi.org/10.3389/fphar.2022.861577.
9. Katewa, S. S., Galav, P. K., & Jain, A. (2010). *Traditional Folk Veterinary Medicines*. Scientific Publishers.
10. Meena, M. K., & Pareek, A. (2021). Rare ethnomedicinal and ethnoveterinary plant species for medicinal use of Dang region Dholpur, Rajasthan (India). *International Journal of Creative Research Thoughts, 9*(5).
11. Murugesan, M., Balasubramaniam, V., Nagarajan, N. (2008). Traditional medicinal knowledge on plant from Velliangiri hills of Coimbatore district, India. ***Journal of Economic and Taxonomic Botany***, 32: 270-276.
12. Nath, K.K., Deka, P., Borthakur, S.K. (2007). Ethnomedicinal aspects of some weeds from Darrang district of Assam.
13. Parveen, S.N. (2009). Plants traditionally used as galactogogue in Nallamalais of Kurnool district of Andhra Pradesh. *Journal of Economic and Taxonomic Botany*.
14. Radha, S., Prakash, N., Sharma, N., (2022). A survey on ethnoveterinary medicines used by the tribal migratory shepherds of Northwestern Himalaya. *Journal of Ethnopharmacology,* 296, 115467. https://doi.org/10.1016/j.jep. 2022.115467.
15. Rani, G.M. (2014). Ethnobotany of Pachamalai Hills. In S. Kumar (Ed.), Ethnobotanical Studies in India (pp. 12-33). *Deep Publications*, New Delhi.
16. Rout, S.D., Panda, S.K. (2010). Ethnomedicinal plant resources of Mayurbhanj district Orissa. *Indian Journal of Traditional Knowledge*, 9(1): 126-130.
17. Shah, R., Pande, P.C., & Tiwari, L. (2008). Traditional veterinary herbal medicines of western part of Almora district, Uttarakhand Himalaya. *Indian Journal of Traditional Knowledge,* 7(2), 355-359.