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TRADITIONAL AND ETHNOZOOLOGICAL PRACTICES BY TRIBES AND RURALS OF CHHINDWARA DISTRICT OF MADHYA PRADESH, INDIA

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ABSTRACT

The present ethnozoological study describes the traditional knowledge related to the use of different animals and animal-derived products as medicines by the tribes and Rural people of Chhindwara district of Madhya Pradesh, India (Gond, Bharia, Mawasi, Ahir), which is well known for its very rich biodiversity. The field survey was conducted from May to July 2016 by performing interviews through structured questionnaires with 25 informants (16 men and 9 women), who provided information regarding therapeutic uses of animals. A total of 18 animals and animal products were recorded and they are used for different ethnomedical purposes, including tuberculosis, asthma, rheumatism, cough and cold, paralysis, cancer, allergy, fit, piles, leprosy, dysentery, fever, diarrhoea, weakness, and antidote. The zootherapeutic knowledge was mostly based on non-chordate and chordate animals, but some protected species like the Pea fowl (*Pavo cristatus*), Sāmbhar (*Cervus unicolor*) were also mentioned as important medicinal resources. We would suggest that this kind of neglected traditional knowledge should be included into the strategies of conservation and management of faunistic resources in the investigated area.

KEYWORDS: Zootherapy, Ethnozoology, Biodiversity, informants, Diseases.

INTRODUCTION

Ethno-zoology focuses at direct relationship of animals to mankind. The term 'Ethno-zoology' as a branch of science that deals with role of economically important animals in life and socio-cultural aspects of tribal or aboriginal peoples. The most important aspect in this context ramifies on traditional mode of treatments of various kinds of elements using animals and animal products in tribal community. Although inadequate, attempts have been made to elucidate medicinal significance of animals and animal products in certain tribal communities from the Indian subcontinent, Jamir and Lal (2005).

Ethnozoology deals with studies on relationship of animals with mankind including primitive rural and tribal people and recording their unique knowledge about animals for search of new resources of drugs, food etc. and socio-cultural aspects of animals in human life. Plants and animals have been need as medicinal sources since ancients' times, Alves and Rosa (2005, 2007), Lev (2003).

Faunal resources have played a wide range of roles in human life from the earliest days of recorded history. The variety of interactions between humans and animals is the subject matter of ethnozoology- the branch of ethnobiology that investigates the knowledge human societies have accumulated concerning animals, as well as their significance to those people and their uses. Ethnozoological studies can be a valuable asset to increase our understanding of the cultural, economic, social, and traditional roles of played by animals, Alves (2012).

The healing of human ailments by using therapeutics based on medicines obtained from animals or ultimately derived from them is known as. The use of animals for medicinal purposes is part of a body of traditional knowledge which is increasingly becoming more relevant to discussions on conservation biology, public health policies, and sustainable management of natural resources, biological prospection, and patents, (Mahawar and Jaroli 2006).

Study Area

Chhindwara district is located on the South-West region of Satpura Range of Mountain. It is situated in the 21.28 to 22.49^0 North latitude and 78.40 to 79.24^0 East longitude and spread over an area of 11,815 sq.km. There are nine tehsil and 1984 villages in the district. Amarwada, Jamai, Bichhua, Harrai, Pandhurna, Tamia, Chaurai, Sausar and Parasia are main tehsils. This district is bound by the plains of Nagpur District (in Maharashtra State) on the South, Hosangabad and Narsinghpur District on the West and Seoni District on the East.

Map 1: Map of Chhindwara District.

From the Geographical point of view Chhindwara district can be divided into three main regions – The plains of Sausar and Pandhurna, The Satpura mountain region is central region and the third region is mostly the Northern region comprising of hilly terrain.

District has majority of tribal population. The tribal communities include Gond, Bharia,Korku, Mawasi and Pardhan. Majority of the tribals speak in Gondi and Hindi mixed with Marathi. Festivals in the district are Pola, Bhujalia, Meghnath, Akhadi, Harijyoti Gyarus, Amawas and Diwali etc. on Shivrathri day Mahadev mela will be celebrated each year on Choudagadh. There are 1984 villages in the district, out of which 1906 villages are habitated. As per census 2011, the total population of the district is 20, 90,922 out of which 15, 85,739 belonging to rural areas. The scheduled tribes' population is 769,778 in district.

MATERIALS AND METHODS

Ethnozoological data were collected by semi-structured interviews. Most of the animals were identified up to species level but a few could be identified up togeneric level. Large animals were identified according to the folk description of each specimen and from the pictures shown to them. Standard taxonomic keys of taxonomists from home and abroad were used to make correct identification of the animals. Ethnozoological data were presented in a tabular form under the headings such as common English name, zoological name, local name and brief ethnozoological note.

The present work is based on information gathered through interview with the village headman and village elders through questionnaire. The villages selected for information were from semi-urban and rural localities where the local beliefs and indigenous practices are performed and have knowledge of identifying the wild life and their traditional use in their society. Knowledgeable persons or medicine men popularly known as "Padiyar or Bhumka" experienced and aged persons, local healers of the villages were consulted in recording local name, animal parts used, drug preparation methods and recommended doses.

RESULT AND DISCUSSION

Total 18 numbers of animals 5 belonging to the invertebrate groups and 13 to the vertebrate groups. Out of 5 animals from the invertebrate group, 1 annelid, 3 arthropods and 1 mollusc. In the vertebrate group, 1 Pisces, 1 amphibian, 3 reptiles, 3 avian and 5 are mammalian fauna. (Table –1).

However some of these animals and their products are being used for the treatment for other disease in different parts of India and abroad, such as the ash of *Phereteima posthuma*, is used in lactation for delivered lady by this area but the ground animal used for high fever due to measles and chicken pox by Tamang people of Central Nepal, Lohani (2010), animal used for wounds, cough, jaundice and pain by tribes of Attappadi hills of Western Ghat, Padmnabhan and Sujana (2008) and crushed animal is applied in eye for red eye by Chakhesang Tribe of Nagaland, Kakati and Dulo (2002). These reports of

medicinal properties of earthworm from other parts of the world where these are used in curing asthma, hypertension, epilepsy, cancer, snake and spider bite, Zhang et al. (1992), Solovan et al.(2004), Jamir and Lal (2005).

Ash of *Periplanata spp.* is used to cure asthma is also used by Naga tribes of Nagaland, Jamir and Lal (2005). It is also used for dysponea, urinary obstruction and uterine problem in Western Ghat, Padmnabhan and Sujana (2008). Cockroach is a good for asthma in Northeast Brazil, Costa- Neto (2000).

lac of *Lacifer lacca* is used for diarrhoea, but powder of animal is used for bone fracture by people of South India, Dixit et al. (2010). *Trombidium grandissimum* is used as 'Viagra' for sex power is also reported in Chhattisgarh, Odhia (2003).

Flesh of *Helix aspersa*, is used for tuberculosis is also used by tribes of Attappadi hills of Western Ghat, Padmnabhan and Sujana (2008). Flesh and shell are used for bone fracture, gastritis, injuries, tongue blister, and skin burn by Chakhesang tribe of Nagaland, Kakati and Dulo (2002).

Carp fish (*Labeo rohita*) is used for rheumatism, but alimentary canal and juice are using for gastric and fever by Tamang people of Nepal, Lohani (2010).

Flesh of *Rana spp.* is used for wounds is also reported by Ao tribes of Nagaland, tribes of Attappadi hills of Western Ghat and Warangal District of Andhra Pradesh, Kakati et al. (2006), Padmnabhan and Sujana (2008), Benarjee et al. (2010).

Shell of *Testudo spp.* is used in piles is also used by Ao tribes in Nagaland, Kakati et al (2006), and ash of carapace is used for healing of internal injuries, purities and cough in Kachchh region, Gupta et al. (2003).

Fat of *Varanus bengalensis*, is used to relieve arthritis is also used by tribes Attappadi hill and Tropical Wild Life Sanctuary Warangal district of Andhra Pradesh, Padmnabhan and Sujana (2008), Benarjee et al. (2010).

Ash of moulted skin of *Naja naja* is used for cancer also used by Tamang people in Central Nepal but meat and fat used for eye sight and cancerous wound by Tamang people of Central Nepal, Lohani (2010).

Nest of *Passer domestica* is used for allergy is also used by Jirels of Central Nepal, Lohani (2011). Roasted animal used for paralysis but flesh is used for stammering by Ao tribes of Nagalnd, Kakati et al. (2006). The use of faecal matter to treat baby constipation, but ash of excreta is used for treatment of asthma in children is reported in Kachchh, Gupta et al. (2003).

Fresh blood of *Columba livia* is used for paralysis in this area is also reported by other groups of Rajasthan, Kachch and Tamil Nadu, Gupta et al. (2003), but excreta is used for magico religious purposes by Jirels of Central Nepal, Lohani (2011). Rosner (1992) have studied the faunal medicinal use in therapeutic of pigeon on remedy for Jaundice.

The *Pavo cristatus* is a symbolic animal, ash of feather uses in diarrhea and dysentery in this area but feather is used for infertility by Saharia tribes of Rajasthan, Mahawar and Jaroli (2007), legs uses for ear infection are similar use in Naga tribes and Bhil of Rajasthan, but legs are boiled with oil in Kachchh and Maharashtra for similar purpose, Jamir and Lal (2005), Patil (2003), Gupta et al. (2003).

Antler of *Cervus unicolor* is used for asthma is also used by Saharia tribes of Rajasthan Mahawar and Jaroli (2007), but the use of antler for eye ailments has reported in the Kachchh region of Gujarat, Gupta et al. (2003).

Ash of *Pteropus spp.* is used in asthma is also used by Naga tribes, Ao tribes of Nagaland and Similipal Biosphere Reserve Orissa. Flesh is used for asthma in Western Ghat, Kakati et al. (2006), Mishra et al. (2011), Padmnabhan and Sujana (2008).

Fat of *Melursus ursinus*, is used in paralysis is also used by tribes of Attappadi hills of Western Ghat, Padmnabhan and Sujana (2008). Liver is used in piles and stomach disorders by Naga tribes of Nagaland. Fat and bile are used for jaundice, malaria, gout, burn and wound by Jirels, Lohani (2011).

Sweat of *Equus hemionus* is used for anti-drug addiction in this area but semen administered orally to cure tetanus and rabies, bones is used for herpes by Saharia tribes of Rajasthan, Mahawar and Jaroli (2007). Dung is used to cure Jaundice in kachchh region, Gupta et al. (2003).

Stool of *Canis alpinus* is used for antidote to poisoning also used in Central Nepal, Lohani (2010). Whole animals, animal parts, and animal-derived products also constitute important elements of the materia medica, Alakbarli (2006), Alves and Rosa (2005, 2007, 2012).

PHOTO GALLERY: "Animal and by Products".

Fig. 1: Nest of *Passer domestica.*

Fig. 2: Feather of *Pavo cristatus.*

Fig. 3: *Columba livia.*

Fig. 4: Horn of *Cervus unicolor (by – product).*

Fig. 5: Bunch of *Helix aspersa*

Fig. 6: *Equus hemionus*

Ethnozoological Observations

Table 1: Animals with their uses.

S. No.	Common Name	Scientific Name	Local name	Mode of preparation
1.	Earthworm	*Pheretima posthuma*	Gindorna	Whole body is crushed and mixed with daliya and administered orally just after delivery for lactating mother**. (Medicinal).**
2.	Lac insect	*Lacifer lacca*	Lakh	Lac powder administered orally for diarrhoea **(Medicinal).**
3.	Red velvet bug	*Trombidium grandissimum*	Badal kida	One animal administered orally for fever. **(Medicinal).**
4	Cockroach	*Periplanata americana*	Kosari	Animal ash is mixed with honey taken once or twice a day to treat asthma. **(Medicinal).**
5	Garden snail	*Helix aspersa*	Sankholi	Flesh is cooked with cumin powder and consumed for 5 days to treat tuberculosis. **(Medicinal).**
				Shell ground, dissolved in honey, taken once daily to treat cough and cold. **(Medicinal).**
6	Labeo	*Labeo rohita*	Rohi	Fish curry used as food and rheumatism. (**Medicinal).**
7	Frog	*Rana spp.*	Mendak	Flesh is crushed into a paste and applied over wound for easy healing. **(Medicinal**).
8	Monitor lizard	*Varanus bengalensis*	Gohta	Skin oil is used for massaging arthritis **(Medicinal).** Penis and testis are eaten raw for production of sexual stimulant of male sex organs**. (Medicinal**)
9	Cobra	*Naja naja*	Nag	Ash of slough is used orally to cure cancer. **(Medicinal**). Ash of slough mixed with coconut oil and applied on leprosy wound for rapid healing. **(Medicinal**).
10	Tortoise	*Testudo spp.*	Kachua	Powdered shell mixed with water and the paste is used for piles. **(Medicinal**).
11	House sparrow	*Passer domestica*	Gaorani	Fume of nest is used to treat allergy**. (Medicinal).** Roasted animal mixed with sama rice and orally used to treat paralysis**. (Medicinal**).
12	Pea fowl	*Pavo cristatus*	Mor	Ash of feather and hive of mud wasp mixed with honey and paste is given to suffering from diarrhoea and dysentery**. (Medicinal**).
13	Pigeon	*Columba livia*	Pareva	Fresh blood massaged on affected part for 7 days once a day to cure paralysis**. (Medicinal**).
14	Sloth bear	*Melursus ursinus*	Richh	Fat oil is massaged on paralyzed part. (**Medicinal).**
15	Sambhar	*Cervus unicolor*	Sambar	Horn rubbed with water and paste is applied on chest and 5 drops are given orally to children for pneumonia. **(Medicinal).**
16	Flying Fox	*Pteropus spp.*	Badur/gadal	Ash is used to cure asthma. (**Medicina**l).
17	Horse	*Equus hemionus*	Ghoda	Sweat mixed with wine and administered orally to cure drug addiction. **(Medicinal**).
18	Wild dog	*Canis alpinis*	Dhol	Its stool is eaten as general antidote to poisoning. **(Medicinal**)

CONCLUSION

Our results demonstrated the persistence of folk medicine practices in chhindwara area, that the tribal and rural communities are still dependent on indigenous knowledge for health care that are being influenced by culture and socio-economic aspects, providing a cheaper and accessible alternative to the high cost pharmaceutical remedies. Other studies are also necessary to preserve the popular medicinal knowledge which is important to enhance our understanding of the relationship among men, society and nature, and also to elaborate more effective strategies for conserving natural resources especially to the chhindwara biome, where the studies concerning this subject are scarce. The possible benefit of animal-derived medications constitutes a rewarding area of research, particularly in countries such as India which have a rich biodiversity of animals resources coupled with a high prevalence and variety of infectious diseases where sustainable utilization of the biodiversity can be carried out. This wildlife is a valuable renewable resource which can continue to produce benefits only if adequate habitats and protection is provided. It is suggested that the government should integrate this health care system into the existing one to ensure proper development and harnessing ethno- medicine in India.

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