

RESEARCH ARTICLE

Indigenous knowledge of Zootherapeutic use of Invertebrate by the Mawasi tribes of Chhindwara District of Madhya Pradesh India

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ABSTRACT

The Mawasi tribes of Chhindwara district of Madhya Pradesh India mostly use invertebrate derived medicine for a whole range of affections like delectation, ulcer, conjunctivitis, leucorrhoea, pneumonia, fit, asthma, fever, rheumatism, ear pain, tuberculosis, vomiting, weakness, impotency and stop bleeding. Detailed information has been obtained on the traditional therapeutic use of 15 different invertebrate species. A field survey was conducted from July 2009 to October 2009 by performing interview through structured questionnaire with 10 selected respondents, who provided information regarding use of invertebrate animals and their products in folk medicine. The zoo therapeutic knowledge inherited since time immemorial was mostly based on the use of invertebrate animals as important medicinal resources. It is suggested that this kind of knowledge may be useful to save the life in emergency. The study also gives emphasis on the strategies of conservation and management of faunistic resources. The ethno-zoological practice indicates that traditional knowledge of zoo therapy is a must and to be strengthened in order to discover the new line of resources in pharmaceuticals.

Keywords: Indigenous, zoo-therapy, Invertebrate, Ethno-zoology, Pharmaceuticals, Ailment.

INTRODUCTION

Since ancient times animals, their parts, and their products have constituted part of the inventory of medicinal substances used in various cultures. The healing of human ailments by using therapeutics based on medicines obtained from animals or ultimately derived from them is known as zotherapy, (Mahawar and Jaroli, 2006). The tribal people are totally dependent on the forest and its resources for their livelihood. They developed their own skills to harvest the natural resources through traditional knowledge system since long back, (Anonymous, 1999). Ingredients of wild plants and animals are not only used in traditional medicine but have been increasingly used as raw material in the preparations, (Kulkarni *et al.*, 1995). Zoo-therapeutic is such a body of indigenous knowledge system built up

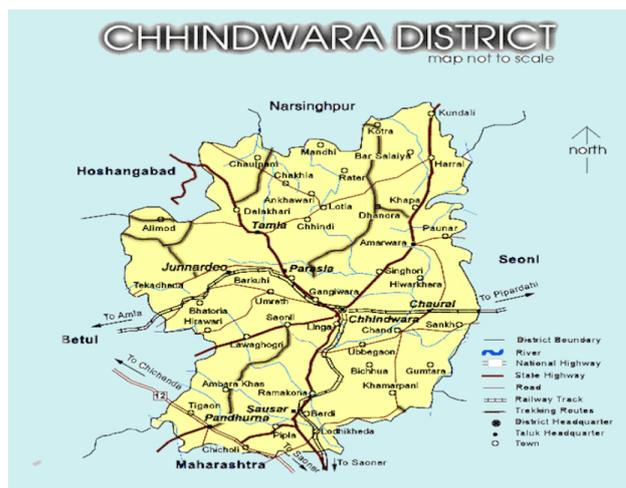
by a group of people through generations, by living in close contact with nature and using traditional drugs of animal origin in the local environment so that it is specifically adapted to the local people and conditions, (Kakati *et al.*, 2006).

A lot of work has been done in the Chhindwara District on the medicinal plants and plant products and documented too, but there is a definite scarcity of such knowledge when it comes to animal products. Therefore in the study it is endeavored to record the important of animal products and their utility as medicine by the Mawasi community in therapeutics. Because it is observed that the Mawasi community residing at the Junnardeo Tahsil of Chhindwara district has been wildly using the animal products as traditional medicine. The study not only brings forth the salient features of the life style of the Mawasi people at Chhindwara and attempts to inventories the traditional nature cure system also suggests a strategy to conserve these animals for future too.

MATERIALS AND METHODS

The Mawasi tribes inhabits Junnardeo tahsil of district Chhindwara. Out of nine tahsil, I was selected Mawasi dominant tahsil i.e. Junnardeo. A study was carried out from July 2009 to October 2009. The proposed work did under selected 10 benefices of tribal's. The pre-structural interview schedule is used for tribals. Respondents are 30 to 70 age group in that group, information was collected by 2 old aged females and 8 males. Local respondents from each group were interviewed from as possible about remedies made from invertebrates, about ailments for which the animal-derived remedies were prescribed. The name of animal and other ethnozoological information were documented. Photographs and discussion were also recorded with the help of camera and voice recorder.

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° North latitude and 78.40 to 79.24° 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.

The Mawasi Tribe: They are traditionally a nomadic community and speak mawasi boli. Mawasi are generally shy, honest and laborious. They are very co-operative in nature and peace loving people. The economic condition of the tribes is not good. Agriculture, animal husbandry, poultry forming and laboring are source of income. They also collect gum, traditional medicine and honey and sale to generate income. The life of the people is full of traditions and social customs from birth to death owing to outdated customs not attuned to remain competitive in the current economic scenario of privatization. Due to living in remote areas traditional culture large number of family member and poverty their children are not able to take even primary education, only 5-10% children get primary education, higher education



Fig.1: Picture of Mawasi Man, (Photo: Neelima Bagde)

The tribal people residing in the remote and deep forest areas still dependent on plants and animals for their primary health care and for treatment for various ailments. (Fig-1, Mawasi Tribe).

RESULTS AND DISCUSSION

This is being used by the Mawasi tribes to treat different ailments (Table-1). The animal species recorded for their medicinal importance belong to 4 phylum and these are being too used to cure around 15 different diseases or health disorders. However the red velvet bug was believed to promote strength and

virility and especially accelerates the sexual vigor in men. The other animal being used for the treatment of delectation, ulcer (wound), conjunctivitis, leucorrhea, pneumonia, fit, asthma, fever, stop bleeding, rheumatism, ear pain, tuberculosis, vomiting, weakness and impotency. The knowledge pertaining to the use of animal species is an important factor even for the conservation of the wildlife, as their population is falling down day by day. Since only a very little is known about their use in medicine and other purposes, it is important that such, information be documented and measures to be taken to buildup a database for the conservation of these important fauna.

Table 1: List of Invertebrate Animal Species Use for Therapeutic Purpose by Mawasi Tribes of Chhindwara District of Madhya Pradesh, India

Sr. No.	Common Name/ Phylum	Scientific Name	Local name	Parts use	Disease treated	Prescription
Annelida						
1.	Earthworm	<i>Pheretima posthuma</i>	Gindorna	Whole	Delactation	Crushed and mixed with Daliya and administered orally by woman just after delivery.
2.	Leech	<i>Hirudinaria granulosa</i>	Gonch	Whole	Ulcer (wound)	Living animal attached with Wound.
Arthropoda						
3.	Honey bee	<i>Apis spp.</i>	Madhu makkhi	Hive	Conjunctivitis	Fume of hive apply on eye.
4.	Lac insect	<i>Lacifer lacca</i>	Lakh kida	Lac	Leucorrhea	Powder administered orally.
5.	Silk worm	<i>Bombyx mori</i>	Kosa kida	Cocoon	Pneumonia	Rub with water and administered orally.
6.	Bed bug	<i>Cimex lectuarius</i>	Khatmal	Whole	Fit	Bound with wheat flour and use orally.
7.	Cockroach	<i>Periplanata americana</i>	Kosari	Ash	Asthma	Ash mixed with honey and administered orally.
8.	Red velvet bug	<i>Trombidium grandissimum</i>	Badal kida	Whole	Fever	Dry animal use orally.
9.	Spider	<i>Lyciosa tarantula</i>	Makri	Web	Stop bleeding	Applied on fresh wound.
10.	Crab	<i>Cancer pagurus</i>	Kekda	Ash	Rheumatism	Ash used with honey.
11.	Scorpion	<i>Palamnius spp.</i>	Bicchhu	Whole	Ear pain	Boiled with mustered oil and used as eardrop.
12.	Prawn	<i>Macrobranchium malcomssonii</i>	Jhinga macchi	Whole	Weakness	Soup is considered for woman just after delivery.
13.	Giant swallow tail butterfly	<i>Papilio cresphontes</i>	Sitab ki illi	Larva	Impotency	Powder promotes production of semen.
Mollusca						
14.	Snail	<i>Pila globosa</i>	Sankholi	Flesh	Tuberculosis	Cooked and used by patient.
15.	Bivalve	<i>Unio spp.</i>	Seepi	Shall	Vomiting	Shell rubs with water and administered orally.



Fig. 2, Bunch of *Macrobranchium spp.*



Figure-3 Hive of *Apis spp.*



Fig. 4: *Trombidium grandissimum*



Fig. 5: Lac of *Lacifer lacca*



Fig 6: Web of *Arenea spp.*

Pheretima posthuma is used for lactation by delivered lady, in this area but the ground animal used for high fever due to measles and chicken pox by Tamang people of Central Nepal also used for wounds, cough, jaundice and pain by tribes of Attappadi hills of Western Ghat. (Lohani 2010; Padmnabhan and Sujana 2008). The *Hirudinaria medicinalis* is used for ulcer, in this area but animal ash is used as sexual stimulant, Pharyngitis and piles by people of Western Ghat and South India (Dixit *et al.*, 2010). Lac powder of *Lacifer lacca*, is used for leucorrhoea but powder of animal is used for bone fracture by people of South India, (Dixit *et al.* 2010). *Cimex lectularius* is used for fit in this area also used by people of South India (Dixit *et al.*, 2010), but it is used in epilepsy, piles, alopecia and urinary disorders by people of Chhatisgarh (Oudhia 2003). *Lyciosa tarantula* web is used for stop bleeding in this area but it is used for aphrodisiac, muscular dystrophy by people of South India (Dixit *et al.*, 2010). *Cancer pagurus* is used joint pain (rheumatism) is also reported tribes in Attappadi hills of western Ghats and Saharia tribes of Rajasthan, roasted animal used for sharpen memory by Tamang people of Central Nepal, whole body for Jaundice and other liver disorders by tribes of Nagaland (Padmnabhan and Sujana 2008; Mahawar and Jaroli 2007; Lohani 2010; Kakati *et al.*,

2002). Fume of hive of *Apis spp.*, is used for eye disease (conjunctivitis), but same use of honey by Mogya, Bawaria, Meena tribes of Rajasthan (Gupta *et al.*, 2003). Honey is used for asthma, cough and cold in Similipal Biosphere Reserve Orissa (Mishra *et al.*, 2011). Ash of *Periplaneta americana*, is used for asthma in this area but ash is used for dysphonic, urinary obstruction and uterine chic, in Western Ghat and Naga tribes of Nagaland (Padmnabhan and Sujana 2008; Jamir and Lal 2005). *Palamnaeus spp.*, whole body boiled in mustard oil and oil use as eardrop in this area but the ash of animal is used to heal wound in Warangal district of Andhra Pradesh (Benarjee *et al.*, 2010). *Bombyx mori*, cocoon of insect is used for asthma and pneumonia in this area but ash is used digestive and eye problem by tribes of Western Ghat (Padmnabhan and Sujana, 2008). Bivalve's *Unio spp.*, shell is used for vomiting in this area but ash of shell is taken for weakness by Saharia in Rajasthan and used for acne by Mogya, Bawaria, Meena tribe of Rajasthan (Mahawar and Jaroli 2007; Gupta *et al.*, 2003). *Pila globosa*, flesh is used for tuberculosis is also used by tribes of Attappadi hills of Western Ghat (Padmnabhan and Sujana 2008). *Macrobrachium malcomsonii* soup is used for weakness by woman just after delivery in this area but the dried powder used for tuberculosis

by Saharia tribes in Rajasthan (Mahawar and Jaroli 2007). *Trombidium grandissimum*, is used for fever in this area but dry animal is used as 'Viagra' for sex power in Chhattisgarh (Oudhia 2003). Larva of *Papilio cresphontes*, is used for impotency in this area but has not possibly been reported earlier in India. Snail (*Pila spp.*) and Mussel (*Unio spp.*) are used in treating ailments like tuberculosis, cough and cold, vomiting and osteoporosis not only by this area also used by Naga tribes of North Eastern India, (Jamir and Lal, 2005).

CONCLUSION

Our result demonstrated the persistence of folk medicine practices in this area, that the Mawasi tribal community is 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 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.

REFERENCES

- Adeola MO (1992) Importance of wild animals and their parts in the culture, religious festivals, and Traditional medicine of Nigeria. *Journal of Environmental Conservation*, 19 (2): 125-134.
- Anonymous (1999) A Resource Atlas of Arunachal Pradesh, (Government of Arunachal Pradesh).
- Benarjee G, Srikanth K, Ramu G, Ramulu KN (2010) Ethnozoological study in a tropical wildlife sanctuary of Eturunagaram in the Warangal district, Andhra Pradesh. *Indian Journal of Traditional knowledge*. 9(4): 701-704.
- Dixit AK, Kadavul K, Rajlaxmi S, Shekhawat MS (2010) Ethnomedico-biological studies of South India. *Indian Journal of Traditional knowledge*, 9(1): 116-118.
- Gupta L, Silori CS, Mistry N, Dixit AM (2003) Use of animal and animal products in traditional health care systems in district Kachchh, Gujrat. *Indian Journal of Traditional knowledge*, 2(1): 346-356.
- Jamir NS and Lal P (2005) Ethnozoological practices among Naga tribes, *Indian Journal of Traditional knowledge*, 4(1): 100-104.
- Kakati LN, Bendang AO, Doulo V (2006) Indigenous knowledge of zootherapeutic use of vertebrate origin by Ao Tribe of Nagaland. *Journal of Human Ecology*, 19(3): 163-167.
- Kulkarni DK, Kumbhojkar MS, Upadhye AS (1995): Ethnobiological resources used in traditional medicines by Mahadev Koli tribe from Western Maharashtra, *Flora Fauna*, 5(1): 65-66.
- Lohani U (2010) Man-animal relationships in Central Nepal. *Journal of Ethnobiology and Ethnomedicine*, 6 (31): 1-11.
- Mahawar MM and Jaroli DP (2007) Traditional knowledge on zootherapeutic uses by the saharia tribe of Rajasthan, India. *Journal of Ethnobiology and ethnomedicine*. 3 (25): 1-6.
- Mahawar MM and Jaroli DP (2006) Animals and their products utilized as medicines by the inhabitants surrounding the Ranthambhore National Park, India. *Journal of Ethnobiology and Ethnomedicine* 2: 46.
- Mishra N, Rout SD, Panda T (2011) Ethnozoological studies and medicinal values of Similipal Biosphere Reserve, Orissa, India. *African Journal of Pharmacy and Pharmacology*, 5(1): 6-11.
- Oudhia P (2003) Interactions with the traditional healers and natives of Bhopalpatnam region, Chhattisgarh, India having rich traditional medicinal knowledge about common herbs insects and other animals. *Research note at Botanical .com* [http://www.botanical.com/site/column_poudhia/121_bhopalpatnam.html].
- Padmnabhan P, Sujana KA (2008) Animal products in traditional medicine from Attappady hills of Western Ghats. *Indian Journal of Traditional Knowledge*, 7(2): 226-329.