



Short Communication

Relevance of Ethnomedicines of Invertebrate origin used by Tribals at Indo-Nepal Border

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Abstract

The article reports the conventional methods to cure the different human diseases by means of diverse invertebrate animals and their product by Tharu tribes of Indo-Nepal Border of Terai region of eastern Uttar Pradesh. They are using many medicine of animal origin. A list of nineteen invertebrates and their products, mode of application with nature of ailments are hereby presented. The information suggests that tribal traditions may have much to contribute to the therapeutic armamentarium.

Keywords: Ethnozoology, Ethnomedicine, Invertebrate animal, Tharu tribes.

Introduction

Ethnozoology is a branch of Anthropology which deals with the study of relationship between tribal people with animals, their interaction and evolution. The discipline of Ethnozoology also represents and focuses on the ways in which animals influence the people they interact with¹. It also deals with studies among the tribes and rural people for documenting their distinct wealth of information about animal's and search of new drug of animal origin and conservation of useful and economically important animals². As the importance of drugs of animal origin is being realized throughout the globe including the developed countries, the medico-ethnozoological studies are getting enhanced attention of the researchers. The medico-ethnozoological system makes wide uses of animal wealth as medicine. These traditional medicines are beneficial or claimed to be so, in a variety of human diseases. The modern human society may be benefited from the tribal experience in its fight against ailment and illness³.

The WHO (World Health Organization) explain this traditional medicine as “the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness”.

In the number of villages of Devipatan Division of eastern Uttar Pradesh, Tharu tribes are inhabited. These are one of the matriarchal tribes of India. The socio-economic condition of this tribal group is very poor.

They make use of many animal and plant species of terai region to meet with their day to day needs⁴. Little efforts have been made to reveal the importance of animals and their byproducts used as medicine by certain tribal communities of India⁵⁻¹¹. Tharu tribes use many animal and plant species for curing of human diseases and healthcare practice, having profound knowledge about medicinal usage. But the healthcare knowledge of these communities, mostly far from documentation, is transmitted orally from generation to generation thereby restricted to a particular family. Due to many reasons, natural bioresources and Tharu culture are decaling at an alarming rate, authors realized to document such traditional knowledge before it is lost forever. The aim of the present investigation was to document the indigenous skill of Tharu tribes inhabiting at Indo-Nepal border in 46 villages of Bahraich, Shravasti and Balrampur districts of Devipatan division of Uttar Pradesh in the treatment of various human diseases by using animals and their products. Authors emphasized to gather ethnozoological information of invertebrate animals mainly Protostomia. The latter includes three invertebrate phyla namely Annelida, Arthropoda and mollusca¹³.

Material and methods

An extensive survey was made in Tharuhat (Tharu areas) of Balrampur, Shravasti and Bahraich districts of Devipatan division of Uttar Pradesh covering 46 villages to collect the ethnozoological information. All the ethnozoological information and associated folk claims were collected through either by personal interview or face to face interaction from local healers (*Guruwa*), village headmen, elder person having thorough knowledge regarding medicinal significance of animals and animal-based remedies.

Results and discussion

Tharu tribes inhabit at Indo-Nepal border including 46 villages of Devipatan division have detailed information concerning the source and application of animal based medicines. They use various animals and their byproducts for curing different human diseases in their own local traditions. The knowledge regarding indigenous medicine is usually restricted to the local medicinal practitioners or healers generally called as *Guruwa*. The information regarding medicinal use of animal by tharu was

collected through interview of ‘*Guruva*’ or face to face interaction of older tribal peoples.

The information regarding medicinal application of invertebrates animals and their body parts or byproducts used as medicine against the different ailment has been presented in table. The common names, zoological names, body parts or byproduct, mode of application against various diseases has been presented in the Table-1.

Table-1: Medicinal applications of some invertebrates by Tharu tribes of Devipatan Division.

Name	Part (s) used	Mode of Application	Nature of ailments or disease
Phylum: Annelida			
Earthworm, <i>Pheretima posthuma</i>	Excreta	Dissolved in water and applied around the anus thrice daily, for two weeks.	Fistula, Piles.
	Whole Body	Eaten raw after Crushing and mixing with water	As antidote in spider and snake bite
		Fried in animal’s fat and extract is applied on the lumbo-sacral region in night, for four weeks.	Impotency/ Aphrodisiac,
		Dried powder once daily	Jaundice
Leech, <i>Hirudo sp.</i>	Whole Body	Fried in mustard oil and extract applied on penis daily at the time of sleeping.	Loss of erectile power
Phylum: Arthropoda			
Bed bug, <i>Cimex sp.</i>	Whole Body	5-6 bugs eaten along with banana or bread once daily, up to three weeks.	Fits, fistula, Piles
		10-12 bugs rubbed over the scalp once daily, for about six weeks.	Baldness, Dandruff.
		Chewed Live	Acute Asthma
Silk worm, <i>Bombyx mori</i>	Cocoon & Worm	Ash with honey	Sexual Problem
Blister Beetle	Whole Body	Incinerated powdered with lemon juice taken orally twice daily, for one week.	Gastric pain caused by indigestion
Asian Ladybird beetle	Whole Body	Incinerated powered with honey	Anemia, Impotency
Lac insect, <i>Laccifer lacca</i>	Lac Powder	Paste of lac powder	Bone fracture
Cockroach, <i>Periplaneta sp.</i>	Appen-dages	Incinerated powdered mixed with lukewarm mustard oil and dropped in ear twice daily, for one week.	Ear Pain
	Whole Body	Soup of 6-8 cockroaches / 6-8 mustard oil fried cockroaches with little spices are consumed once daily for four weeks/ till the disease is cured.	Bronchitis, Asthma, Tuberculosis
		Ash in crude liquor	Urine problem
Crab, <i>Carcinus sp.</i>	Flesh	Cooked with ginger and garlic and taken once daily, for four weeks.	Jaundice, Low BP, Loss of erectile power
	Whole Body	Grinded and boiled in water to make soup.	Asthma, Liver disorders, Tuberculosis
		4-5 crabs cooked with light spices and consumed once daily, for four weeks.	General weakness, Impotency

	Body oil	Oil extract from body applied into eyes twice daily, for three weeks.	Weak-sight
Fireflies/ Lighting bug	Whole Body	1-2 worms eaten along with banana once daily, for four weeks.	Night blindness, weak-sight
Honey bees <i>Apis</i> sp.	Sting	Burned ash rubbed with lukewarm mustard oil daily	Paralysis, Senselessness
	Honey	One table spoon with lukewarm water and lemon juice in empty stomach in morning once daily	For reducing Obesity
		Regularly applied into eyes daily at Night	Eye-sight problem
		Taken orally thrice daily, for one week	Constipation, Diarrhea (infant)
		Rubbed along with mustard oil and salt on the gums thrice daily, for one week.	Toothache, Pyorrhoea
		Incinerated banana leaves mixed with honey taken twice daily, for three weeks.	Asthma, Bronchitis
Jumping Spider, <i>Pellenes</i> sp.	Whole Body	Fried in mustard oil and massaged with the oil prepared twice daily.	Paralysis, Acute muscular Pain
Spider, <i>Tegenaria domestica</i>	Web Ash	Web ash with honey twice daily	Impotency, Muscular dystrophy
Scorpion, <i>Palemmaeus</i> sp.	Spicules	Burned powered with mustard oil than applied to the affected site once daily	Scorpion bite
	Whole Body	Cooked with light spices / crushed into paste to make soup twice daily, for one week.	General weakness
		Boiled with mustard oil and massaged on joints with the prepared extract twice daily.	Rheumatoid arthritis Pain
Wasp, <i>Vespa</i> sp.	Whole Body	Grinded with mustard oil/ with honey & salt and applied on the inflamed part/ applied against infected area.	Inflammation, Pain, Leucoderma/skin diseases.
Prawn	Carapace	Incinerated powdered with honey applied on gums of infants twice daily, for one week.	Weak teething, Swelling of gums
	Whole Body	Cooked with light spices / crushed into paste to make soup twice daily, for one month.	Loss of erectile power, Low BP, General weakness
House fly, <i>Musca domestica</i>	Whole Body	Swallowed Live	For stimulating vomiting
Phylum: Mollusca			
Apple snail, <i>Pila globosa</i>	Shell	Incinerated powered mixed with honey and applied on the chest twice daily, for three weeks.	Pneumonia
	Flesh	Flesh is eaten after cooking with little spices once daily, for four weeks.	Asthma, Bronchitis, Tuberculosis, Stomach disorders and eye related problems.
<i>Unio</i>	Shell	Incinerated powered mixed with milk and given to the children twice daily, for four week.	Rickets
	Flesh	Cooked and consumed once daily, for two weeks.	Weak-sight
	Flesh filtrate	After crushing and filtering, the filtrate is dropped into eyes twice daily	Night-blindness

The medico-ethnozoological data collected during survey from tharu tribes of the many villages of Davipatan division of eastern Uttar Pradesh revealed fascinating information regarding the applications of different parts or organs of invertebrate and their byproducts as medicine might serve as potential sources in treating the wide range of human diseases.

The present study revealed that total 19 genera of invertebrate animals were used by tharu tribes to treat about 32 different ailments. The uses of animals origin drugs by some ethnic communities to treat various human diseases have also been reported from different geographical regions in India^{3,5,6,10,12,14,15}.

The earthworm is one of nature's pinnacle 'soil scientists' having therapeutic benefits¹⁵. The lady bird beetles are beneficial from the viewpoint of biological control of pests¹⁶. Due to easily availability, insects was mostly used by tribes, as was reported from Assam, India^{11,18} demonstrated the importance of indigenous animal diversity in folk medicine and noticed that animal composition, accessibility and availability directly influence the type of zootherapeutic resources used in any given region¹².

Noteworthy is the observation that some of the treatments particularly those related to asthma, bronchitis, gastric disorder, impotency, rheumatic joint pain, muscular dystrophy, eye and ear problems work miraculously. This information suggests that tribal traditions may have much to contribute to the therapeutic armamentarium. The use of whole animals for medicinal purpose was recorded to be the highest, followed by other animal's parts and byproducts.

Conclusion

In conclusion, fauna based indigenous skill and resource managing practices of the tribal people dwelling in remote area of Indo-Nepal border of eastern Uttar Pradesh should be applied in modern development strategies. As the use of ethno medicines of invertebrate origin by tribals are still very much relevant in modern context too, hence there is a need to facilitate and disseminate their knowledge for the benefit of larger segment of society. Authors recommend a multilateral dialogue and communication between local communities, Government and Non-Governmental Organizations with the ultimate objective of mainstreaming traditional knowledge to optimize the benefits of development assistance, especially to the tribal people.

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