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## Zoo-therapeutic practices among the deori tribes of Dhemaji district, Assam, India

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### Abstract

Indigenous zoo-therapeutic healing practice is an old practice passed on from one generation to another by using the naturally available fauna in our environment. Rural tribal people of our Northeast India still seen relying on the traditional medicine prepared by our elders who are well expertise in handling the natural remedies from fauna. Dhemaji district of state Assam is inhabited by many tribes and among them Deori tribe contributes to the indigenous tribal population of the district. The present study focuses on this tribe and their traditional knowledge of using faunal species as medicine to heal different health problem. Due to dependence on modern medicinal treatment and anthropogenic activities, this tradition of using animal as remedy is not giving importance. Therefore it is an ardent need to research and conserve the ethno-zoological knowledge which was prevalent among the ancestors to treat different ailments. Therefore present study focuses on identifying the valuable medicinal properties of the animals.

**Keywords:** Indigenous, zoo-therapeutic, deori tribe, ethno-zoological

### Introduction

North-East India is considered to be rich in both flora and fauna along with diverse culture and tribes. Deori tribe is one of the plain tribal community of Assam dwelling mostly in the upper valley of Brahmaputra with their rich culture and traditional heritage. Dhemaji district is also inhabited by this Sino-Tibetan family of Mongoloid race. Rich diversity gives an ample source of zoo-therapeutic knowledge and belief passed on from generation to generation among different existing native tribe for the primary health care system [6, 11]. Zoo-therapeutic practices deals with the treatment of human health problem, from the by products derived from animals which is considered as the essential constituent of curative measure [3]. Treatment of human ailment with the help of local indigenous medicines from animal can be said to be zoo-therapy, which also serve as a great significance in religious, culture, magic rituals [13]. Tribal inhabitants of Namakkal district of Tamil Nadu prefer homemade remedies from 45 different species of animals for treating 55 ailments [6]. Nyishi tribe of Arunachal Pradesh practices zoo-therapy with the use of 18 animal species for preparing medicines well as taken as diet [13]. Bodo tribe of Assam also highly depends on the traditional knowledge of using different frog species for treating various skin diseases [11]. Native khasi tribe of Meghalaya is also reported to have applied knowledge of zoo-therapy in treating malaria, boils, white blemish on tongue and lips similar to leucoderma and many diseases [10]. 39 species of aquatic and terrestrial animals are reported to be used as treatment by Adi tribe of north east [4]. Even Tangsa and Wancho tribe of Arunachal Pradesh prefer to use medicines derives from birds and animals in the treatment of various health related problems [8]. Use of 14 species ichthyo-fauna is another traditional practice of disease treatment among the karbi people [14]. Another report of using 48 animal species for treating diarrhea, gastritis, jaundice, body ache etc is being identified by major ethnic groups of karbi Anglong [15]. Biatae tribe of Dima Hasao is also reported to have adapted the zoo-therapy with 34 faunal species in treating 34 different health problems [2]. In another survey among the various 14 aboriginal Naga tribe of Nagaland state, 26 animal species is documented to alleviate different health related problems and diseases [7]. Thus the objective of present study is to elucidate medicinal knowledge of Deori tribe of various villages under Sissiborgaon block development using fauna.

### Method and methodology

Dhemaji district is situated in the eastern part of the of the state, in the north bank of the river Brahmaputra. It is situated between the 94 0 12' 18''E & 95 0 41'32'' E longitude and 27 05' 27'' N and 27 0 57' 16''N latitude covering an area of 3237 sq. km.

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The study of zoo-therapeutic practice was carried out in Deori villages randomly selected in Dhemaji district which fall under Sissiborgaon development block which is approximately 22 km from the district headquarter with total geographical area of 933.01sq km. To collect better random households were selected from each villages. Data collected were through semi structured questionnaires, group discussions, informal interviews with the those person who were recognized as experience old age person, traditional

healers, mid wives. Interviewed persons were shown photographs of the species and for proper identification. The villagers can speak in Assamese language was made comfortable to communicate. The fauna were identified with the help of the villagers, mode of preparation of the medicines, parts used of the particular fauna were recorded in details. Identification with scientific names was done through internet, relevant and standard literature.

## Result and discussion

Table 1.

Common Name	Zoological name	Parts used	Disease	Preparation of medicine
Earthworm	<i>Perionyx excavates</i>	Whole body	Infant fever	Earthworm is kept in a container with salty water and the water is taken orally
Earthworm	<i>Metaphire houletti</i>	Whole body	Piles	Kept in a container with salty water and taken orally
			Typhoid fever	Cooked with pepper and consumed
Honey bee	<i>Apis indica</i>	Honey	Stomach ache	Mix with the juices of Indian gooseberry and taken as syrup
		Honey	Cough	Honey is mixed with crushed pepper and to it sap of basil and ginger is mixed and taken orally in empty stomach
		Honey	Urinary incontinence	Leaves of <i>Scoparia dulcis</i> is crushed and mixed with missiri and honey is taken orally
Black crab	<i>Scylla serrata</i>	Whole Body	Skin allergy or redness	Boil in water and taken orally
Red ant	<i>Oecophylla smoragdina</i>	Abdomen	Nose bleeding	Made to inhale
Fish	<i>Puntius sp.</i>	Whole body	Eye problem	Fish is cooked and consumed
Fish	<i>Channa gachua</i>	Whole body	Gall bladder stone	Flesh is cooked and consumed
Cuchia	<i>Amphipnous cuchia</i>	Blood	Anemia	Blood is taken orally
		Whole Body	Piles	Flesh is cooked along with tuber <i>Lasia spinosa</i> and consumed.
Frog	<i>Duttaphrynus melanostictus</i>	Body part	Tonsil	Flesh is cooked and consumed.
Hen	<i>Gallus gallus</i>	Egg	Hair split	Egg yolk is mixed with <i>Lawsonia inermis</i> and applied on hair.
		Whole body	Low pressure	Meat is cooked with banana flower is eaten.
Pigeon	<i>Columba livia</i>	Whole Body	Low pressure	Meat is cooked with pepper and consumed.
Rat	<i>Rattus sp.</i>	Whole Body	Epilepsy	Flesh is cooked and consumed.
Pig	<i>Sus scrofa domesticus</i>	Fat oil	Rheumatic and skin problem.	Oil is applied on the affected area.
		Intestine	Gastritis	Dried and consumed
Porcupine	<i>Hystrix indica</i>	Flesh	Pneumonia	Flesh is mixed with <i>Centella asiatica</i> , lemon leaves, <i>Solanum indicum</i> and boiled in water. The boiled water is taken orally.
Fox	<i>Canis aureus</i>	Body flesh	Paralysis	Flesh is cooked and consumed.
		Body flesh	High pressure	Flesh is sun dried and consumed.
Cow	<i>Bos indicus</i>	milk	Spermatorrhoea	Milk is mixed with <i>Cheilocostus speciosus</i> and taken orally.
		Milk	Gastritis	Milk is mixed with raw turmeric juice and is taken orally.
		urine	Skin problem on hands	Applied over the affected area
Goat	<i>Capra hircus</i>	tongue	Speech problem in childhood.	Cooked and given to eat.
		Feet bones	Hand and leg cramp	Bones are boiled with paste of ginger, pepper and water is taken orally.

## Results and discussion

During the survey 17 animal species were seen to be used in treating health diseases and problems by the Deori community of the Sissiborgaon block under Dhemaji district. The result is shown in the table 1. Largest concentration of indigenous people are found in seven northeastern states of India. Tribal communities are more close to nature and are well expert in using animals, in fulfilling their basic requirements and medicines. They are mostly seen to be familiar with many animal species and their products to treat various ailments including cough, nose bleeding, gastritis, high pressure, typhoid, pneumonia, piles, rheumatic problems etc. They use the whole body parts or by products like milk, urine, intestine, blood. Some body parts are sundried and kept for future

treatments. Some animals were seen to be used as broad spectrum medicine. Folk medicines are seen to be prepared by the village elders rather than the younger generation. Practice of zoo-therapy is not only seen among the tribal communities of north east but also in other states of India. Animal species are seen to be mixed with other plant parts to prepare the medicine which is seen in mixing cow milk with *Cheilocostus speciosus* to treat spermatorrhoea. In spite of taking animals as folk medicine, some of the species including cuchia, pig, hen, pigeons, fishes are also consumed as food value and protein supplements. Traditional consumption of weaver ants larvae and pupa as food by frying is also prevalent among the people during the Assamese festival in the month of April A critical study on practices of zoo-therapy among the ethnic groups of

northeastern part of India reveals a total of 221 animal species are used in various region of this part of India [5]. Similar study was documented by Mahawar and Jaroli with approximately 109 animal species used as traditional medicine in alleviating from health problems in India [9]. It is found the numbers of mammals are more widely used animal group. Animals are used in socio-religious occasion and as sacrificial offerings as well as their parts are used as ornaments or as amulets or as decorative pieces at home. Animals are used in many superstitious traditional beliefs among the tribal people which are passed on from uneducated elderly people to their offspring [1]. Zootherapeutic practices are prevalent in other countries of the world. A research on zoo-therapeutic practices in selected area of Albania, Italy, Spain and Nepal shows the use of 80 animal species in 232 therapeutic remedies [12].

### Conclusion

Traditional knowledge of use of animals and their animal products are old age practice adopted by the tribal dwelling remote area and are continuing from time immemorable. Wild or domesticated animals are used for many purposes. Close contact with the nature has given an opportunity to discover the medicinal value of the animal, which has set an example of human-animal relationship. This traditional of using zotherapy may give an scope to modern science in experimenting out the actual medicinal property and nutritional value present within, which will make the people aware of the value of animal and conserving the biodiversity. Heinous act of animal exploitation and illegal smuggling is causing a threat to the ecosystem. Modernization is also a prime cause for the vandalisation of the natural resources. Elderly villagers are treasure of ethno-zoology knowledge and belief than the upcoming generation who are more inclined towards scientific medical treatment. In this study prime aim is to document the fauna used by the ethnic Deori tribe and to safe guard and make zoo-therapeutic practice alive.

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