

APPLICATIONS OF FOLK ZOOTHERAPY IN BHADRAK DISTRICT, ODISHA, INDIA

Sujata Priyadarshini Nayak*¹, Dr. Rajendra Kumar Singh*²

*¹M.phil. Student, Department of Zoology, Dr. C V Raman University, Kota, Bilaspur,
Chhatishgarh, India.

*²Supervisor, Department of Zoology, Dr. C V Raman University, Kota, Bilaspur, Chhatishgarh, India.

ABSTRACT

Nature is the earliest source of vital human requirements and has provided a continuous source of raw materials used for various purposes. Human beings are not only intelligent but also social animals, which through ages have developed the technique to harness the natural resources for their very existence. A survey is necessary to identify the use of potential animals within the traditional pharmacopoeia of Odisha state with particular emphasis on Bhadrak districts. The present study revealed the traditional knowledge of treating various kinds of ailments using different animal species and their products by the local inhabitants of Bhadrak district of Odisha, India.. More information on the uses of various animals in traditional medicine was provided by elderly people in the age groups of more than 50 years. The people use these animals and their products for the treatment of many kinds of different ailments including asthma, paralysis, cough & cold, fever, skin diseases, urinary disorders etc. These animals were used as whole or by products of these animals like milk, blood, organ, flesh, feather, dung, bone etc. for the treatment of various ailments.

Keywords: Folk zootherapy, Applications , Bhadrak district.

I. INTRODUCTION

Nature is the earliest source of vital human requirements and has provided a continuous source of raw materials used for various purposes. Human beings are not only intelligent but also social animals, which through ages have developed the technique to harness the natural resources for their very existence. As civilizations grew from 3000 BC onwards in Egypt, the Middle East, India and China, the uses of plants/animals become more sophisticated and written records are prepared. They rely on folk medicine systems and their traditional Materia Medica (medicinal plants and other materials) for their everyday health care. Plants and animals have also played an essential role in the development of human culture. Odisha, one of the states of eastern India, has vast genetic resources amid complex cultural diversity. Despite considerable progress in the management of different diseases by conventional drugs, the search for natural animal/plant products as alternative therapy is ongoing. Consequently, a number of animals/plants in Odisha have been investigated (Mishra et al., 2011) for healing activities, and in most cases, significant results have been recorded. In spite of the numerous publications on the effectiveness of traditional medicine in controlling diseases in different districts of the state (Panda and Mishra, 2011; Panda et al. 2016), there has been no work done to examine the potentiality of medicinal animals used for the treatment of human in Bhadrak districts of Odisha, India. Therefore, a survey is necessary to identify the use of potential animals within the traditional pharmacopoeia of Odisha state with particular emphasis on Bhadrak districts.

Study Area

The study area comprises two adjoining districts of Odisha (i.e. Bhadrak 20°43'-21°13'N and 86°6'-87° E and Kendrapara 20° 21'- 20° 47'- N and 86° 14' - 87° 03'- E) situated in central coastal plain zone of Odisha state, eastern India, south Asia and covers an area of 5149 km², with a population of 29.46 lakhs (2011 Census). The investigation was carried out in all the nine blocks of Kendrapara district and seven blocks of Bhadrak district. The districts accounts for 3.31% of the state's territory and shares about 7.02% of the state's population. Most of its people live in villages (90.94%) and agriculture is their main occupation. The districts are located in the deltaic region with close proximity to the Bay of Bengal. Obviously, it has all the features of a coastal climate, i.e. saline weather, influence of coastal wind and cyclone proneness. Periodic earth tremors, thunder storms in the

rains and dust storms in April and May are characteristic features of the districts. The district has its unique importance in the world for 'Bhitarkanika national park' and Gahirmatha sanctuary for *Olive ridley* turtles.

Data collection

The present ethnozoological investigation was the result of personal observations made after carefully planned field work among the various people of the Bhadrak and Kendrapara district, Odisha, India during 2021-2022. The field study was carried out following established and standard procedures. Information related to a medicinal animal species was collected from 'informants'. First of all local people were consulted with the explanation of aims and objectives of the research for the identification of resource persons (informants). They give advice regarding the people who would be the best source of information. Researchers met these people and explain the research theme. The criteria for the selection of informants for the interview were their reputation in the society regarding their knowledge about herbal medicines and traditional healthcare system. Knowledgeable persons or medicine men, Kaviraj, experienced and aged persons, senior citizens, teachers, social workers, religious leaders, etc. were consulted. Field tours to these areas were planned in such a way as to collect ethnobotanically important species either in flowering or fruiting stage. For a proper understanding of local customs, beliefs, habits and uses of plants/animals, different categories of people like family heads, healers, old experienced and knowledgeable informants and medicine men were interviewed repeatedly. Generally the local medicineman or village headman accompanied the author during field trip to the study area. Before embarking on trips the localities were carefully selected on the basis of the available information about the areas to be visited.

II. RESULTS

The present study revealed the traditional knowledge of treating various kinds of ailments using different animal species and their products by the local inhabitants of Bhadrak district of Odisha, India. More information on the uses of various animals in traditional medicine was provided by elderly people in the age groups of more than 50 years. Table-1 shows people were using animal species for the treatment of over 41 kinds of ailments including asthma, paralysis, cough & cold, fever, skin diseases, urinary disorders etc. These animals were used as whole or by products of these animals like milk, blood, organ, flesh, feather, dung, bone etc. for the treatment of various ailments.

Table 1: Ethnozoological inventory of Bhadrak and Kendrapara district, Odisha, India.

Sl. No.	Zoological name, family/order & local name	Diseases	Mode of application
1	<i>Apis indica</i> (Fabricius 1798) Apidae Athropoda, 'Honey bee'	Eye	The honey prepared by the honey bee is used as eye drop to cure eye disease.
2	<i>Araneus</i> sp. Athropoda, 'Spider'	Wound	Spider web is applied to fresh wound to cheque bleeding.
3	<i>Blatta orientalis</i> (Linn. 1758) <u>Blattidae</u> , 'Cockroach'	Asthma and Tuberculosis	Cockroaches are eaten raw as a remedial measure to cure asthma and tuberculosis.
4	<i>Bombyx mori</i> (Linn. 1758) <u>Bombycidae</u> , 'Silkworm'	Nutrient Food	The killed larvae after boiling are taken as nutritious food for vitality.
5	<i>Bos domesticus</i> (Linn. 1758) Bovidae, 'Gai'	Heart disease, arthritis, asthma	Two teaspoonful of urine is taken before breakfast to cure heart disease, arthritis and asthma.
6	<i>Bubalus bubalis</i> (Linn. 1758), Bovidae, 'Mahinsi'	Asthma	One glass (200–250 ml) of boiled milk is taken before breakfast to cure asthma.
7	<i>Buceros bicornis</i> , (Linn. 1758) Bucerotidae,	Rheumatism	Oil is heated and applied locally to

	'Kuchilakhai'		cure rheumatism.
8	<i>Calotes versicolor</i> (Daudin, 1802), Agamidae 'Andua'	Epilepsy	1–2 ml of blood is taken orally in empty stomach to cure epilepsy.
9	<i>Cancer pagurus</i> (Linn. 1758), Cancridae , 'Kankada'	Cough ,asthma, T.B	Ash of crab is taken orally to cure lung diseases such as cough ,asthma and T.B.
10	<i>Canis aureus indicus</i> , (Linn.1758) Canidae, 'Jackal'	Paralysis, arthritis, asthma	The fresh meat is taken raw to cure paralysis and arthritis and the blood is given to cure asthma.
11	<i>Canis familiaris</i> (Linn. 1758) Canidae, 'Kukura'	Malaria Headache	Curry prepared from the flesh is taken twice daily for prevention of malaria. Urine is applied over fore head to relieve headache.
12	<i>Capra aegagrus hircus</i> (Pallas, 1776) Bovidae, 'Chheli'	Skin disease	The oil extracted from the fat of the animal is applied over the affected area of skin.
13	<i>Cervus unicolor</i> (Kerr, 1792), Cervidae 'Sambar'	Chronic dysentery	Blood mixed with sugar is administered for 3 days to cure chronic dysentery.
14	<i>Cimex rotundatus</i> , (Latreille , 1802) Cimicidae, 'Bedbugs'	Ring worm	Whole body crushed with tulsii (<i>Ocmium sanctum</i>) is applied topically for ring worm.
15	<i>Columba livia</i> , (Gmelin , 1789) Columbidae , 'Thakurapara'	Paralysis	Meat of black pegin is givento cure paralysis.
16	<i>Corvus splendens</i> (Vieillot, 1817), Corvidae , 'Crow'	Whooping Cough	Roasted or boiled flesh is eaten to treat whooping cough.
17	<i>Crocodylus palustris</i> , (Lesson , 1831) Crocodylidae , 'Gumohan kumbhira'	Skin diseases	Little quantity of excreta mixed with coconut oil is applied locally for skin diseases.
18	<i>Cynopterus sphinx</i> (Vahl, 1797), Pteropodidae , 'Chemenia'	Whooping Cough	Raw flesh is eaten to treat whooping cough and rubbed over the external injuries for wound healing.
19	<i>Dasymutilla Occidentalis</i> (Linn. 1758), Mutillidae , 'Velvet ant'	Inflammation	Ointment prepared from the powder of this ant with bees wax is used to treat inflammation
20	<i>Dorylus labiatus</i> (Shuckard, 1840) Formicidae , 'Ant'	Nervous disorder, good health	Whole body of these ants with honey is kept for a fortnight and the honey is taken orally to strengthen nervoussystem and to restore good health.
21	<i>Felis domesticus</i> , (Linn. 1758) Felidae, 'Cat'	Arthritis	The whole body of the animal is boiled and the extracted juice is given to cure arthritis.

22	<i>Gagata cenia</i> (Hamilton 1822) Sisoridae, 'KantiaMachha'	Burns over skin	The oil is extracted from the animal and applied over the burns.
23	<i>Gallus domesticus</i> , (Linn. 1758), Phasianidae , 'Hen'	Body pain Arthritis	Blood is externally massaged to cure body pain and applied externally for treating arthritis
24	<i>Gallus sonneratii</i> (Temminck, 1813), Phasianidae , 'Jungle fowl'	Asthma, Breathing problem	Flesh is properly cooked and eaten to cure asthma and breathing problem

III. CONCLUSION

Odisha, endowed with rich biodiversity of medicinal plants/animals, many of which are currently used in the traditional management of various ailments. The present study indicates that folk 'domestic medicine' still exists among people and play a significant role in the treatment of various human and domestic animal ailments and also testifies ancient traditions in rural areas of Bhadrak and Kendrapara district of Odisha, India. This knowledge is relevant to science and human society in fostering better understanding of traditional medicines and its relationship from historical, economical, sociological, anthropological, and environmental viewpoints.

ACKNOWLEDGEMENT

I would like to express my sincere thanks and gratitude to my supervisor Dr. Rajendra Kumar Singh for letting me work on this project and also very grateful to him for his support and guidance in completing this project.

IV. REFERENCES

- [1] Adhikari JN, Bhattarai BP, Rokaya MB, Thapa TB (2020) Ethno-medicinal uses of vertebrates in the Chitwan-Annapurna Landscape, central Nepal. *PLoS ONE* 15(10): e0240555.
- [2] Alves RRN and Rosa IL. 2005. Why study the use of animal products in traditional medicine? *J Ethnobiol. Ethnomed.* 1:1-5.
- [3] Alves RRN and Alves HN.2011. The faunal drugstore: Animal-based remedies used in traditional medicines in Latin America. *J Ethnobiol. Ethnomed.*7:9-51.
- [4] Bagde N and Jain S. 2017. Traditional and ethnozoological practices by tribes and rurals of Chhindwara district of Madhya Pradesh, India. *World J Pharmaceut Med Res.* 3(8), 263-268.
- [5] Chakravorty J, Ghosh S and Meyer-Rochow VB.2011a. Practices of entomophagy and entomotherapy by members of the Nyishi and Galo tribes, two ethnic groups of the state of Arunachal Pradesh (North-East India). *J. Ethnobiol. Ethnomed.* 7:5-18.
- [6] Chakravorty J, Meyer-Rochow VB and Ghosh S. 2011b. Vertebrates used for medicinal purposes by members of the Nyishi and Galo tribes in Arunachal Pradesh (North-East India). *J. Ethnobiol. Ethnomed.*