

# Traditional Medicines and Health Care from the animals of Manipur, India

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**Abstract-** Manipur, a rich state of fauna and flora and their product are used as medicine from the immovable time. People of Manipur use large number of animal species in zoo-therapy treatment for different ailments. Both domestic and wild animals are made as whole or different parts for treatment of almost all the commonly occurring health problems. Health care practice includes local and oral applications to cure diseases. People have relationship with animals at culture, spiritual and materials levels. The present paper attempt to document the traditional ethno-zoological knowledge of our state. Altogether thirty three species of animals and their product, nature of ailment and mode of treatment has been presented. Five species of invertebrate and twenty eight species of vertebrate was listed. In invertebrates five species belonging 5 families and in vertebrates twenty eight species belong to 20 families. Among vertebrates 3 species are endangered, 4 species are vulnerable, 4 species are near threatened and the rest are least concern expect human. These animals were used in treatment of 35 ailments as traditional medicines for health care.

**Index Terms-** Zoo-therapeutic, Remedies, Magico-religious value, Manipur

## I INTRODUCTION

In the world many cultures still depends on traditional medicine for primary health care. Traditional medicines have been relied upon to support, promote, retain and regain human health. According to world health organisation (2008) report about 80% of the populations in some African and Asian countries are depends on traditional medicines for primary healthcare. Use of traditional medicine is equally significant in the developed countries; nearly 70-80% of the population has been used some form of "alternative or complementary" medicine. Traditional medicine mainly depends on herbal treatment, animals or animal derived products are also used. It has been reported that more than half of the world's modern drugs are of biological resources and out of 252 that has been selected by WHO as essential to human health, 8.7% comes from the animals sources (Marques J G, 1997). From this, animals have been playing a significant role in healing process, folk rituals and religious practices.

Manipur is situated in the North-eastern corner of India within latitudes 23°81'N and 25°68'N and longitude 93°03'E and 94°78'E. There is an oval shaped valley surrounded by hills on all sides. It comprises 1820 sq.km of valley and 20,507sq.km of Hill areas. It is bounded by Nagaland on the north, Mizoram and Chin hills (Myanmar) on the South, the Somra tract and upper Chindwin District of Myanmar on the east and Cachar District of Assam on the west (Bino, 1993). Mountain dweller are characterised by isolation, remoteness, marginally and drudgery of farm labour. Manipur is known for its ecological distinctive and rich biodiversity, having many endemic flora and fauna and rich cultural diversity. Nowadays, due to population explosive and various developmental activities, forest are being destroyed that result change in composition and diversity of species leading to a rapid loss of many important species including rare and endemic ones. Besides forest land have been converted to wasteland and natural environment has been adversely affected. Traditional ecological knowledge and resource management systems practiced by the indigenous communities since ancient time, need to be properly understand and revived in order to conserve biodiversity.

Traditional or folk medicine is still preventing among the people of Manipur, as means of primary healthcare. The practice involves numerous magico-religious performances and administration of plant and animals or their product. For some ailment minerals are also used. Zootherapy is an integral part of traditional health care practice among tribal and rural people of Manipur. This may be a source of information for scientists in their effort towards the discovery of animal based medicinal agents for treatment of various diseases. Nature has been a source of medicine from immortal time and an impressive number of modern drugs have been isolated from natural sources. The importance of scientific ethno-zoological studies has recently been impasized by many scientists all over the world (Maffi, 1996; Lev E, 2003; Costa-Neto, 2005; Mahawar *et al.* 2006; Alves *et al.* 2007, Lohani, 2011). Although a few scientists have reported food and medicine value of some animals (Singh *et al.* 1998, Rajesh *et al.* 2012) a comprehensive ethno-zoological study in Manipur is still lacking. In this, the aim of present paper was to document the traditional ethno-zoological knowledge of our state before knowledge disappeared.

## II METHODOLOGY

The information was collected from the folk healers (Maiba/Maibi) from different villages of Manipur who was expert in diagnosing and treatment illness practice by using animal products. Data were collected with interview method and group discussions. It was presented as common name in English language, along with local and zoological name. Fish and animals used in health care practice were identified using available literature (Jayaram, 1999),( Vishwanath, 2002),( Tikader, 1983)

## III RESULT AND DISCUSSION

Traditional medicine is a necessary part of primary health care among Manipuri. Knowledge on thirty three animals has been documented and given in Table 1. Fauna are given with their scientific names along with local names. In case of medicinal used, details covering method of preparation of animals medicine, different part or product used and method of application of medicine have been provided.

Out of thirty three animals, 5 animals belonging to invertebrate and 28 belonging to vertebrate. Out of 5 invertebrate 3 animals belong to phylum arthropoda, 1 animal belong to phylum mollusca and 1 animals belongs to phylum annelida. In vertebrate group, 11 animals belong to the series pisces (class – Actinopterygii), 1 animals belong to class-Reptilia, 2 animals belong to class – Aves and rest 14 animals belong to class Mammalia. Among these vertebrate animals, *Pethia manipurensis*, *Axis porcinus* and *Panthera sps* are endangered animals; vulnerable animals are *Python sps* , *Felis sps*, *Rucervus unicolor* and *Bos sps*; near threatened animals are *Anguilla bengalensis*, *Wallago attu*, *Labeo pangusia*, *Capra sps* and the rest animals are least concern except *Homo sapiens*.

Altogether 3 animals are domestic animals, 11 animals are fishes and rest are wild animals except human. Animals cited belong to different use categories such as food, medicine, magico-religious and faith healing. Animals are used either whole or in parts in all the use categories. Zootherapeutic remedies are derived from three sources-parts of animal, metabolic products and glandular secretions. Parts of animal used are skin, flesh, viscera and bones. Metabolic products used in remedies are urine and glandular secretions used are honey and egg. Normal parts such as flesh and viscera are used as food. Such animals form important source of protein for the people of the state. Some animals are used as magico-religious animals. Only the hard part of the animal which do not decompose easily such as endoskeleton and exoskeleton used as “charms”. The charms are worn normally in the form of amulets and pendants to ward off perceived ‘evil eye’ effects.

Only live animals are used in faith healing therapy. These animals are either set free live as augury as in case of *Columba sps* and *Clarias sps* or even offered to the deity as sacrificial offering as in case of cat fishes and goats. Sacrificial offerings are made to please the diety or ancestral spirits which are supposed to control the life of these people.

Fish is an integral part of folk ritual. During marriage ceremony live fish such of *Channa orientalis* and *Channa punctatus* are run away in the water that may be in pond or river for welfare of bride-groom in their future life. This live fish were also used in the ‘Sajiboo Cheiraoba (New year day of Meitei in Manipur) by every family for welfare of their family in future life. Edible and ornamental fish have been used in the treatment of certain ailments. These are prepared by cooking as curry and fried after fermentation and directly given to the patient. Manipur people traditionally use the flesh milk and milk curd for cure of stomach ulcer, hair falling, dizziness etc. Honey has been widely used in the treatment of mouth ulcer, as brain tonic and for body complexion.

Animals used in magico-religious are *Python sps* (reptile) *Columba sps* (bird) *Pteromys sps* (mammal). Certain phenomenon such as abnormal sound of domestic hen in the night and sudden sight of cats before the onset of long journey of a person indicate bad omen. Similar kinds of man animal relationship at spiritual level are found among tribal groups of India and abroad (Borang 1996).

**RESULTS:** Finding of animals, animal products and their medicinal uses by the people of Manipur in various kinds of suffering as summarised in **Table 1**.

**Table 1: Medicinal uses of animals, animal parts in traditional therapy**

### INVERTEBRATES:

| Sl. | Zoological Name & | Common Name & | Part used | Preparation & Medicinal uses |
|-----|-------------------|---------------|-----------|------------------------------|
|-----|-------------------|---------------|-----------|------------------------------|

| No. | Family(F)                                 | Local Name                  |            |   |
|-----|---|-----------------------------|------------|---|
| 1.  | <i>Periplanata sps</i><br>F. Blattellidae | Cockroach,<br>Kharambi      | Whole body | Cockroaches are eaten raw as a remedy measure for relieving asthma, diabetes, tuberculosis and normal flow of urine till recovery.  |
| 2.  | <i>Pheretima sps</i><br>F. Megascopelidae | Earth worm<br>Tinthrok      | Whole body | Earthworm is eaten raw to serve as an antidote in snake and spider bites. Powdery animal with oil can also be used in boil, twice a day..   |
| 3.  | <i>Pila globosa</i><br>F. Ampullariidae   | Apple snail,<br>LabukTharoi | Whole body | Flesh is eaten after cooking as a relief measure in asthma, tuberculosis, stomach disorders and eye related problems.   |
| 4.  | <i>Carcinus maenas</i><br>F. Portunidae   | Common Crab,<br>Waikhu      | Whole body | The whole body is crushed into a paste and boiled in water to prepare a drink which helps in curing jaundice and other liver disorders twice daily.   |
| 5.  | <i>Apis sps</i><br>F. Apidae              | Honey bee<br>Haying Khoi    | Honey      | Honey is taken orally to cure body ache and gastric. It is also applied to wound part of tongue to cure mouth ulcer till recovery. Honey is also eaten in case of snake bite. Fried honeybee broods like larvae, pupae and eggs are eaten with great taste. |

**VERTEBRATES :**

| Sl. No. | Zoological Name & Family (F)                | Common Name & Local Name            | Parts Used               | Preparation & Medicinal uses  |
|---------|---|-------------------------------------|--------------------------|---|
| 1.      | <i>Monopterus albus</i><br>F. Symbranchidae | Eel fish,<br>Ngapurum               | Whole fish,<br>Raw blood | Fresh blood of the fish or Raw fish is taken orally to cure general weakness, to relieve anemia and asthma till recovery.                           |
| 2.      | <i>Pethia manipurensis</i><br>F. Cyprinidae | Fire fin barb,<br>Ngakhameingang bi | Whole fish               | Fish is cooked or boiled and taken to regain health.  |
| 3.      | <i>Puntius sophore</i><br>F. Cyprinidae     | Fire-fin barb,<br>Phabounga         | Whole fish               | Sun-dried fish is used for preparation of a fermented product called ngari. Ngari is used in vegetable currying. Fermented cooked cure common cold. |
| 4.      | <i>Pethia ticto</i><br>F. Cyprinidae        | Fire fin barb,<br>Ngakha            | Whole fish               | Fermented cooked with bamboo shoot is taken to purify the blood. Fermented cooked with chili is taken to cure the common cold.                      |
| 5.      | <i>Clarias magur</i><br>F. Cyprinidae       | Cat fish,<br>Ngakra                 | Whole fish               | Cooked fish is taken regularly to cure small pox, nutrition for children and regain health after delivery.  |
| Sl. No. | Zoological Name & Family (F)                | Common Name & Local Name            | Parts Used               | Preparation & Medicinal uses  |
| 6.      | <i>Mystus ngashep</i><br>F. Bagridae        | Cat fish,<br>Nga-shep               | Whole fish               | Cooked fish is eaten to cure small pox.   |
| 7.      | <i>Channa punctatus</i>                     | Green snake head,                   | Whole fish,<br>bile      | Cooked fish is taken to cure diarrhoea. Bile of the fish is taken thrice a day can prevent malaria and taken till                                   |

|         |   |                                   |                              |  |
|---------|---|-----------------------------------|------------------------------|--|
|         | F. Channidae  | Ngamubogla                        |                              | recovery.  |
| 8.      | <i>Anguilla bengalensis</i><br>F. Anguillidae         | Indian long fin eel, Ngaril laina | Flesh, fat                   | Flesh is eaten with great taste. Fat is applied and message to relieve rheumatic and arthritis thrice a day.   |
| 9.      | <i>Heteropneustis fossilis</i><br>F.Heteropneusti dae | Cat fish, Ngachik                 | Brain                        | Raw brain is consumed when sting by fish itself as analgesic.  |
| 10.     | <i>Wallago attu</i><br>F. Siluridae                   | Catfish, Shareng                  | Whole fish, Head             | Boiled fish is taken to regain strength. Boiled head of the fish is taken regularly to improve liver function.   |
| 11.     | <i>Labeo pangusia</i><br>F. Cyprinidae                | Cyprinid fish, Ngatin             | Flesh                        | Cooked or boiled fish is taken regularly to regain from weakness after delivery.   |
| 12.     | <i>Python sps</i><br>F. Pythonidae                    | Python, Lairen                    | Flesh, bile duct, fat        | Cooked fish is eaten; its bile duct is used as an antidote against spider and snake bite. Fat is applied to relieve body ache, rheumatic and burn wounds pain thrice a day.  |
| 13.     | <i>Columba sps</i><br>F. Columbidae                   | Pigeon, Khunu                     | Flesh, Meat                  | Magico-religious value :<br><br>Meat is cooked and eaten. Mostly flesh of young birds is used to relieve general weakness.   |
| 14.     | <i>Passer domesticus</i><br>F. Passeridae             | Sparrow , Sendrang                | Flesh                        | Flesh is eaten after cooking to increase sexual desire. It is also eaten to cure arthritis.  |
| 15.     | <i>Salenarctos sps</i><br>F. Urisidae                 | Bear, Sawom                       | Gall bladder, Bile duct, Fat | Gall bladder and bile duct extract are used for relieving stomach disorders. Fat is applied on joints to relieve rheumatic pain, burns, wounds and boils etc. thrice a day till recovery.  |
| 16.     | <i>Felis sps</i><br>F. Felidae                        | Wild cat, Lamhoudong              | Flesh                        | Flesh is cooked and eaten for relieving asthma related problems.   |
| 17.     | <i>Canis aureus</i><br>F. Canidae                     | Wild fox, Lamhui                  | Flesh, Fat                   | Flesh makes delicious food, Eating flesh helps relieving cholera, asthma, tuberculosis and chest pain. Fat is applied to cope with bodyache, rheumatic pain and skin diseases.   |
| 18.     | <i>Canis sps</i><br>F. Canidae                        | Domestic dog, Hui                 | Flesh                        | Flesh soup is used to improve health. Flesh soup also cures make impotency.  |
| Sl. No. | Zoological Name & Family                              | Common Name & Local Name          | Parts Used                   | Preparation & Medicinal uses   |
| 19.     | <i>Rucervus unicolor</i><br>F. Cervidae               | Sambar, Sajan                     |                              | Flesh is cooked and eaten. Bones are powdered and suspended in water to make drop for relieving ear-ach. It also relieves chest pain, rheumatic pain and fever. Leg soup facilitates delivery. Fat relieves pain associated with |
| 20.     | <i>Muntiacus muntjak</i>                              | Barking deer,                     |                              |  |

|     |   |                                    |                       |   |
|-----|---|------------------------------------|-----------------------|---|
|     | F. Cervidae                                 | Shaji                              | Flesh, Bone, Leg, Fat | burn wounds and piles.  |
| 21. | <i>Axis porcinus</i><br>F. Cervidae         | Hogdeer,<br>Karsa                  |                       |   |
| 22. | <i>Capra sps</i><br>F. Bovidae              | Goat,<br>Hameng                    | Flesh, Milk, Urine    | Flesh is cooked and eaten. Milk is drunk to avoid weakness. Urine is taken to cure paralysis, tuberculosis, asthma, skin diseases and stomachache. Milk is drink to avoid weakness and it also cure night blindness, jaundice and other liver related problems. |
| 23. | <i>Macaca sps</i><br>F.Cercopithecidae      | Monkey,<br>Yong                    | Flesh, Meat           | Monkey meat cures tuberculosis, stomach disorder and general weakness.  |
| 24. | <i>Panthera trigis trigis</i><br>F. Felidae | Tiger,<br>Kei                      | Flesh, Fat, Milk      | Flesh is cooked and eaten. Fat is applied for relieving body ache, rheumatic, burns, and wounds. Its milk cures cataract and night blindness.   |
| 25. | <i>Sus scrofa</i><br>F.Suidae               | Wild boar,<br>Lamok                | Meat, Fat             | Wild boar meat is a delicacy. Fat oil is used to nourishment of the hair.   |
| 26. | <i>Bos sps</i><br>F. Bovidae                | Domestic cow,<br>Shan              | Urine, Milk           | Urine is highly valued. It is sprayed to the house and adjoining area to disinfect. Urine is also used as pesticide and is sprayed in the agricultural field to kill pests. Milk gives nourishment.   |
| 27. | <i>Pteromys sps</i><br>F. Sciuridae         | Flying squirrel,<br>Kheiroi apaibi | Meat, Intestine, Far  | Magico-religious value :<br><br>Meat and intestine is cooked and eaten as an antidote to general poisoning. Both far and dried fleshes are used in making charms.   |
| 28. | <i>Homo sapiens</i><br>F. Hominidae         | Human ,<br>Mee                     | Urine, Milk           | Urine is applied to eye injuries, as antiseptic on flesh wounds. Milk is applied as eye drop to relieve eye ache.   |

#### IV CONCLUSION

Based on thirty three species of animals, present study reveals that animals and their product might serve as potential sources in curing a wide spectrum of ailment besides being a source of food. Both domestic and wild animals are source of food and medicine in human beings. Most fearful, strong, rare and large sized animals are the sources of the most potent zoo-therapeutics remedies. Some of smaller animals such as earth-worm, cockroach, crab, and snail are generally regarded as useless creatures by human beings. Present study shows that valuable traditional knowledge regarding various uses of animal in ailment. Many birds and endangered animals are the sources of Zoo-therapeutics remedies. This traditional practice is mostly done in the hilly belts and remotes area where there are lacks of proper education in Manipur.

Traditional medicine is based on resource availability and therefore, study of such practices provides information about diversity and distribution of organism in the past. Further traditional knowledge of indigenous people can provide leads for sustainable use and management of natural resources. Concerted studies should be undertaken to evolve management policies by incorporating traditional management practices with scientific practices, such integrated approach will conserve not only natural resources but also preserve culture as well as. It is urgent to document ethno-zoological knowledge of other ancient communities of this state Manipur and before the knowledge disappears from the land.

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#### REFERENCES

1. Alves RRN, Rosa IL & Santana GG. The role of animal derived remedies as complementary medicine in Brazil. *Bio Science* (2007) 57(11): 949-955
2. Borang A. Studies on certain ethno zoological aspects of Adi tribes of Siang District, AP India. *Arunachal Forest News* (1996) 14(1) PP 1-5.
3. Costa-Neto E M. Entomotherapy or the medicinal use of insect. *Journal of Ethnobiology* (2005) 25: 93-114.
4. Darshan S, Bestu H. Vitality, Health and cultural diversity. *Compas Newsletter for Endogenous Development* (2000). No. 3 P 4-7.
5. Dutta BK, Dutta PK. Potential of ethnobotanical studies in North-East India. An over view. *Indian J. traditional Knowledge* (2005) 4: 7-14.
6. Devi OB. Studies on the bionomics and fishery of Osteobrama belangeri. *Ph D Thesis*, Manipur University (1993) 1-221
7. Jamir NS. Ethnobiology studies among Naga tribe in Nagaland. *Pro Biodiversity Conservation* (1999) P-128.
8. Joseph ANT. uses of animals as drugs in certain tribes of Madhya Pradesh. *J. Pharmacol* (1982) 2: 229-235.
9. Jayaram K.C. *Fresh Water fishes of Indian Region*; Naredro Publishing House, Delhi (1999).
10. Kakati LN, Doulo V. Indigenous knowledge system of Zootherapeutic use by Chakhesang tribe of Nagaland, India. *Journal of Human ecology* (2002) 13(6): PP 419-423.
11. Lev E. Traditional healing with animals (Zoo therapy) Medieval to present day levantin practice, *Journal of ethonopharmacology* (2003): 85: 107-118.
12. Lohani U, Rajbhandari K, Katra S. Need for systematic ethnozoological studies in the conservation of ancient knowledge system in Nepal-A review. *Indian journal of traditional Knowledge* (2008) 7(4): 634-637.
13. Lohani U. Man- animal relationship in Central Nepal. *Journal of Ethnobiology and Ethnomedicine* (2010) 6:31.
14. Lohani U. Traditional Uses of Animals among Jirel of Central Nepal. *Ethno-Med* (2011) 5(2): 115-1124.
15. Maffi L. "The Blesters" smallpox and an early care of Mayan self-help. In: SK Jain(Ed): *Ethnobiology in human welfare* New Delhi: Deep Publications (1996).
16. Mahawar MM, Jaroli DP. Animals and their product utilized as medicines by the inhabitants surrounding the Ranthambhore National Park, India. *Journal Of ethnobiology and ethnomedicine* (2006) 2(46):1.
17. Marques JG Faunal Medicine. Recurso do ambicute ou ameaca a biodiversidade? *Mutum* (1997) 1:4.
18. NS Jamir, P Lal. Ethnozoological practices among Naga tribe. *Indian Journal of additional Knowledge* (2005) . 4(1) PP 100-104.
19. Rajesh SY, Devi Onita, Singh Abujam, Chetia. Study on the ethnomedicinal system of Manipur. *International Journal of Pharmaceutical & Biological Archives* (2012) 3(3): 587-591.
20. Ronghan R, Teron R, Tamuli AK, Rajkhowa RC. Traditional Zootherapy practice among the Karbis of Assam (India). *The Ecoscan* (2011) 1:161-166.
21. Salanki GS, Chutia P. Ethnozoological and sociocultural aspects of Monpas of Arunachal Pradesh. *Journal of Human ecology* (2004) 15(4):251-254.
22. Saikia K, Ahmed R. Wetland fish diversity of Majuri river island (India) and their medicinal values. *The Clarion* (2011) 1:91-96.
23. Sharma VP. Ethnozoological studies on the invertebrate of Rajasthan State, India. *Utter Pradesh J Zool* (1990) 10(2), 133.
24. Sharma VP, Khan AU. The ethnomedico zoological drugs of bird origin used by Garo Tribal, Meghalaya, *Annal Of Forestry* (1995a) 3(2):1.
25. Singh KK, Singh RKG, Sharma SK, Loitonjam A. Ethnozoological study of vertebrate among the Meitei community of Manipur. *Utter Pradesh Journal Of Zoology* (1998). 18(1): 19-26.
26. Traditional Medicine, Geneva, Switzerland: World Health Organisation *Fact Sheet No 124*(2008).
27. Tikader B.K. *Threatened animals of India*. Zoological survey of India(1983).
28. Valentina Teronpi, H.T. Singh, AK Tamuli, Robindro Teron. Ethnozoology of the Karbis of Assam, India: Use of Ichthyofauna in Traditional health-care practices. *Ancient Science of Life* (2012) 32(2) 99-103.
29. Vishwanath W. *Fishes of North-East India: A field guide to species identification*. R&K packaging Industries (2002) 1-198.

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