

## Zootherapeutic Practices of the Ao Naga Tribe of Nagaland

S. Imkongtiba Longkumer<sup>1</sup>, Bendang Ao<sup>2</sup>, Chiratho. M Nyuwi<sup>3</sup> and Lanusunep<sup>4\*</sup>

<sup>1</sup>Research Scholar, Department of Zoology, Nagaland University, Lumami

<sup>2</sup>Associate Professor, Department of Zoology, Nagaland University, Lumami

<sup>3</sup>Assistant Professor, Department of Zoology, Fazl Ali College, Mokokchung

<sup>4</sup>Department of Botany, Nagaland University, Lumami

Received : 7<sup>th</sup> Nov. 2018

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### Abstract

Tribal community's medicinal practices have been dependent on traditional medicines since time immemorial. This knowledge that has been garnered over the years and has been passed down from generation to generation. Ethnic medicines are used to treat a variety of ailments, and the fact that these practice is still being followed, and sometimes preferred over modern allopathic medicines, is a testament of its efficacy in treating sickness. Six invertebrates and eight vertebrates and their therapeutic uses as practised by the Ao Naga tribe of Nagaland are documented in this paper. Medicine derived from animals and their various body parts/products are used for treatment of various ailments such as deep wounds, pneumonia, stomach ulcer, vomiting, sinus problems, loose motion, dysentery, diarrhoea, stomach ache, gastritis, jaundice, diabetes, as a contraceptive, child delivery, deworming, fish bones stuck in the throat, etc. This rich history and practice needs to be scientifically studied and documented. Another important point to be noted is the urgent need for sustainable management and conservation as some of the animals on the list are threatened or endangered.

**Keywords:** Zootherapeutic practice, Ao tribe, Nagaland.

### Introduction

The World Health Organization (WHO) defines 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". Among others, the most

widely used traditional medicine systems today include those of China, India, and Africa (Che *et al.* 2017, 15). Animals and their products which are derived from different parts of their bodies have constituted a large part of the inventory of medicinal substances which are used in various cultures since the ancient times (Efraim, 2003, 107).

The Ao (Naga) tribe of Nagaland inhabits Mokokchung district, which lies between

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\*Email: adilk1983@yahoo.com

25°6' - 27°4' N longitude and 93°2' - 95°15' E latitude covering an area of 1,615 sq. kms. The Ao tribe is considered as an advanced tribe among the Nagas, but the fact that the practice of traditional medicine still flourishes today amongst them is a pointer to its efficacy in treating various ailments.

Ethno-medicines comprise the medical aspects of traditional knowledge that has been developed over generations in various societies before the age of modern medicine. A substantial knowledge that has been accumulated by the villagers and tribal people on ethno medicine remains unknown to modern science. Ethno-medicine is holistic and used in providing treatment for physical ailments as well as psycho-spiritual ones. In many parts of the world, it is used to prevent and eliminate the effects of witchcraft, appease the spirits and cure chronic illnesses. Local medicine men practicing traditional medicine are numerous and serve as an important storehouse of traditional knowledge of healing (Tabuti *et al.* 2003, 119).

Pushpagandan (1990, 189) and Neto (1999, 15) noted that a lot of effort has been put into the documentation of the uses, identification and validation of plant-based traditional medicines, but studies on most of the zootherapeutic medicines are sporadic, even though traditionally many animal based medicines are used and administered all over the world. Numerous species linked with the tribal people are on the brink of disappearing and are vulnerable. Deforestation, urbanization and modernization has had a huge impact in shifting the rural people from their native habitats and their vast expertise is slowly dwindling. Our immediate concern is

to preserve this knowledge. Most of the knowledge existing today is confined mostly to the older generation. Therefore, approaches are needed to preserve and develop this traditional knowledge (Vedavathy, 2003, 236). Das *et. al.*, (2017, 1) has documented a total of 221 animals species which are used by 19 ethnic groups from the North-East region of India. Mammals are the most widely used animal groups followed by Arthropods, Aves, Pisces, Reptiles, Annelids, Amphibian and Molluscs.

### **Methodology**

This study was conducted during the period of March 2016 and November 2017. Primary data was obtained by travelling to as many villages as possible and interviewing the local traditional medicine practitioners and herbalists (*kabiraj*) using a structured questionnaire. Former patients and senior citizens were also interviewed to make the data more comprehensive. Only those animals which were used for therapeutic purposes was considered and the various information such as the animal, parts used, mode of administration and its remedial qualities were collected and recorded. The animals were identified by actively searching for it and in those cases where this was not possible, pictorial cues were used.

During the survey period, a total of 7 medicine practitioners and 103 people (former patients and senior citizens) were interviewed to obtain the data.

### **Results and Discussion**

During the study period, information was collected on 6 invertebrates and 8 vertebrates, which were used specifically for therapeutic

purposes. The name of the species, its common name, local name, parts/product of the animal used and the purposes for which it is used is summarized under table 1.

The data reveals that various animals ranging from insects to mammals are used to treat a variety of ailments like deep flesh wounds, pneumonia, severe gastritis, stomach ulcers,

Table 1: List of animals and their body parts/products used for therapeutic purposes by Ao tribe, Nagaland, India.

Sl. No	Zoological Name	Common Name	Local Name	Parts Used	Uses	Scientific study carried out
1	<i>Apis indica</i>	Indian Honey bee	Ninang	Honey	Honey is used as a remedy for cough and applied on deep wounds to prevent blood loss.	Several studies confirmed having many medicinal properties.
2	<i>Axis axis</i>	Spotted deer	Mesu	Feet, unborn foetus, vagina	1. Feet is dried, boiled and soup is fed for smooth child delivery 2. Unborn foetus is dried, boiled and soup is fed for quick delivery 3. Vaginal secretion is used as contraceptive. Vagina is dried, boiled and the soup is drank as contraceptive	No study carried out to find out the medicinal properties of the parts used.
3	<i>Funambulus sp</i>	Squirrel	Susang	Whole body	Roasted, boiled and soup is given to young children to pneumonia	No study is done regarding the medicinal properties of parts used.

<b>4</b>	<i>Glomeris marginata</i>	Giant pill millipede	Atsu-perptsu	Whole adult	Roasted and eaten as a remedy for tooth decay and for deworming in humans and pigs.	No study is done regarding the medicinal properties of parts used.
<b>5</b>	<i>Gallus domesticus</i>	Domesticated chicken	An	Gall bladder	Gall bladder is swallowed whole to treat chronic gastric problem and stomach ulcer	Several studies Revealed the bile of animals have medicinal properties.
<b>6</b>	<i>Gryllus sp</i>	Cricket	Chokok	Whole adult	Boiled in bamboo and drunk to treat loose motion and vomiting.	No study is done to find out medicinal properties of parts used.
<b>7</b>	<i>Hystrix indicus</i>	Porcupine	Chipchu	Stomach, Spines	1. Stomach is dried and soaked in water and drunk to treat stomach ache, vomiting and dysentery 2. Spine is burned to ashes, mixed with water and drunk to treat stomach ache and loose motion	No study is done to understand medicinal properties of the parts used.
<b>8</b>	<i>Lutra lutra</i>	Otter	Shierm	1. Flesh 2. Oesophagus	1. Cooked and consumed to prevent fish bones from getting stuck in the throat. 2. Dried oesophagus is used to massage the throat when fish bones get stuck.	No study is done to find out medicinal properties of the parts used.

<b>9</b>	<i>Manis sp</i>	Pangolin	Khulep	Scales	The scales are burnt and the ashes are mixed in water and drunk for deworming.	No study carried out to find out medicinal properties of the parts used.
<b>10</b>	<i>Oecophylla smaragdina</i>	Weaver ant	Warabi	Abdominal fluid	Abdominal area is crushed and squirted into the nasal area for sinus problems.	No study is done to characterise the medicinal properties of the parts used.
<b>11</b>	<i>Passer domesticus</i>	House sparrow	Alu shishak	Whole body	Boiled and the soup is drunk to treat pneumonia	No study is done for the medicinal properties of the parts used.
<b>12</b>	<i>Python molurus</i>	Indian rock python	Ngem	Flesh	Flesh is dried after removing the skin, roasted in fire, ground, soaked in water and drunk during dysentery	No study is done to find out medicinal properties of the parts used.
<b>13</b>	<i>Potamiscus manipurensis</i>	Black crab	Tsungkenak	Whole body	Boiled in water and drunk to treat jaundice and diabetes	No study is done to understand the medicinal properties of the parts used.
<b>14</b>	<i>Trigona sp</i>	Stingless bee	Ninang	Honey	Honey is consumed to treat diarrhoea. Honey is mixed with mustard oil and applied on chest to treat pneumonia	Several studies revealed that honey has medicinal properties.

loose motion, vomiting, dysentery, stomach ache, diabetes, diarrhoea, jaundice, sinus problems *etc.* There are even cases of successful deworming procedures and help in complicated scenarios such as smooth child delivery and even contraceptive measures using the traditional methodologies. While some animals or their parts are consumed raw, roasted or simply cooked, there are instances where the animals or their parts have to be specifically processed or mixed with other ingredients before administering it. The knowledge of these complex procedures are passed on through many generations and are mostly acquired through trial and error. Traditional or native healers specialize in a specific area of their profession i.e., some practitioners are experts in bone-setting, healing wounds, various poisonous bites, neurological disorders, *etc.*

Various surveys and researches have been carried out on ethnozoological practices in India and abroad. Jaroli *et. al.*, (2010, 6) reported 24 animal species which were used to treat 34 various ailments in the surroundings areas of Mount Abu wildlife sanctuary, while Jamir and Lal (2005, 199) documented 26 animal species used for zootherapeutic purposes among the various tribes of Nagaland. Kakati and Duolo (2002, 163) also reported 12 mammals, 1 bird, one reptile, 2 amphibia, 1 fish, 1 mollusc, 1 annelid, 4 arthropods used by the Chakhesang tribe of Nagaland for the treatment of general injury, pain, skin burn, liver problems, bone fractures/dislocation, gastric problems, fever, urethritis, constipation, cough, diarrhea, parturition, body swelling, malaria, asthma, chicken pox, eye treatment and wart.

It should be noted that there is no doubt about the efficacy of these traditional medicines among its users even though none of these zootherapeutic medicines has been tested during the study. In India, Most of the rural and urban poor people depend on these remedies since it is within their reach. In fact, in remote areas it is the only source of available health care (Vedavathy, 2003, 236). It is for this very reason, that zootherapeutics and other ethno-therapeutic practises have great importance in areas with limited access to modern allopathic medicines, medical facility, and transportation (Kakati *et. al.*, 2006, 419). (Jamir and Lal, 2005, 100) opined that, although traditional in nature, these medicines works miraculously in alleviating both common and severe kinds of afflictions. Verma (2014) suggested that this kind of traditional knowledge should be included into the scientific literature for the conservation and management of medicinal faunistic resources.

Many animals in Nagaland are endangered and some are extinct due to over exploitation. It should be noted that the IUCN has listed the Indian Pangolin as one of the world's most hunted and endangered animal. The present study holds great importance from a ecological perspective since some of the animals on the list are vulnerable or endangered. Unabated use of animals by the locals for medicinal and other purposes has threatened and endangered many animals due to several kinds of anthropogenic pressures operating in that region (Gupta *et. al.*, 2003, 346). Therefore, these resources should be utilized judiciously through sustainable management and conservation of biodiversity

so that they continue to be a dependable source of income, medicine, food and other benefits (Kakati and Doulo, 2002, 419).

The study has clearly demonstrated that animal body/parts are used by Ao Naga tribe to treat several human diseases. Except medicinal properties of honey, no scientifically acceptable study is carried out to find out the medicinal properties of the different animal body/parts used (Table-1). Under these circumstances, it is extremely necessary to undertake scientific evaluation of the animal body/parts used to treat human health related problems. The study should cover cytological, biochemical and physiological level to understand the chemical properties as well as medicinal

properties and their efficiency in treating various ailments or the study may suggest adoption of modern medicine for better remedy from various sickness that are treated by traditional medicine.

#### **Acknowledgement**

The authors are thankful to the people of Mokokchung district, especially the traditional medicine practitioners for sharing their knowledge and for their support during the data collection, without which this project would not have been possible.

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