

# Exploring Ethnozoological Observations Among The Tribal Inhabitants In ‘Bajag’ Forest Range Of Dindori District Of Central India

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**Abstract:** *Ethnozoology is a sub field of Zoology and it is a multidisciplinary area that also draws inter-disciplinary insights from Anthropology as a major area of research, reason being anthropologists are expert in ethnic studies, and the core area of Ethnozoology is closely related to ethnic communities itself. Ethnozoology deals with the study of human-faunal relationship. Human relationship with their environ is not a new phenomenon and human interface with nearby fauna exists due to a broad range of purposes like food, medicine, transportation, clothes and others materials needs. The present paper focuses on zootherapeutic practices among tribal inhabitants in Bajag forest range of Dindori district of Madhya Pradesh, India. Study is primarily based on empirical data and the data was collected following intensive anthropological fieldwork among the Baigas, Gonds and the Kols who constitute to ethnic population of the study area. Interviews, schedule, observation and photographic tools are extensively applied for primary data collection. Data was collected about faunal species which are used as medicine for a specific ailment and is put on record. It is found in the study that various animal parts are used in cure of 23 different health problems. It is also revealed from the present study that aforementioned tribal communities used a total of 26 faunal species in treatment of diseases. Data collected on Ethnozoology and zootherapeutic clearly attests to the fact that ethnomedicine is an effective and affordable means to combat against diseases in the area.*

**Keywords:** *Ethnozoology, Anthropology, Zootherapeutics, Ethnic community, Bajag forest.*

## 1. INTRODUCTION

The study is focused on Ethnozoological aspects. Ethnozoology is a sub field of zoology and it is a multidisciplinary area that includes anthropology also, because anthropologists are expert in ethnic studies, and the core area of Ethnozoology is closely related with ethnic communities. Ethnozoology deals with the study of human-faunal relationship. Present study also describes the role of anthropologist in such kind of studies.

### **Ethnozoology**

The term Ethnozoology first appeared in 1899 in an article by Mason entitled ‘*Aboriginal American Zootechny*’ considering it as a branch of zootechnology (Mason, 1899). Gregory Forth from University of Alberta, Canada discussed on history of Ethnozoology in *The International Encyclopedia of Anthropology* (edited by Hillary Callan) which says that, before the 19<sup>th</sup> century European naturalist would often refers to knowledge of the natural world drawn from non western people but this practice later declined, owing to the influence of cultural evolutionary paradigms that characterized non-western peoples as ignorant, purely pragmatic in their interests or inclined to mystical thinking. The first use of “Ethnozoology” has been attributed to Otis Mason, who defined the term as the “zoology of [a] region as it is recounted by the savage” (1899:50). Investigations identifiable as Ethnozoological had been conducted earlier in 19<sup>th</sup> century, particularly among indigenous populations within the territories of the United States (Gregory, 2018). Henderson and Harrington worked among the Tewa Indians community and published their work as ‘Ethnozoology of Tewa Indians’ in 1914 which was another important and initial work on the Ethnozoology. In this monographic study they provided detailed information on indigenous classification and nomenclature.

The term ‘Ethnozoology’ derives its origin from two root words ethno+zoology, both are of Greek origin. The word ethno comes from *Ethnos*; means ‘group or a community of people or population’ and the word zoology comes from word ‘zoion+logos’, zoion meaning ‘animal’ and *logos* meaning ‘the study of’ so the zoology is the study of animals in all aspects. As per above discussion we can infer that Ethnozoology is the study of interrelationship or interface between a particular ethnic group and various animals living in their surrounding. Alves and Souto (2015) also opined that Ethnozoology emerged from the field of ethno sciences, and seeks to understand how different people of world have perceived and interacted with faunal resources throughout history but Shrivastava and Tomar (2019) are of the view that the Ethnozoology is a sub branch of Ethnobiology which particularly deals with people’s belief, faith and knowledge. Ethnobiology is the science of relationship among plants, animals and human beings. It is an ancient branch dealing with traditional knowledge. (Shrivastava and Tomar, 2019) Another important and insightful study by Borah and Prasad (2017) enlists forty four different animal species which are used by the native inhabitants of Gobbon Wildlife Sactuary in Assam (India). The study also emphasizes on documentation of indigenous/traditional knowledge as it may proves to be useful alternative remedial system to treat a vast series of diseases which the native inhabitants face time to time. In a country like India, where there are enumerable number of animal species reported, only 54,500 species of insects, 2546 fish, 1232 birds, 456 species of reptiles, 390 kinds of mammals and 209 species of amphibians (Alfred, 1997; Puri, 2007). Hence, there is paucity of data on ethnozoological data and these kinds of studies are need of the day to enumerate the vanishing species of fauna and their uses in treatment of various animals. Keeping this in mind the present study was undertaken.

### **Anthropology and Ethnozoology**

The term Ethnozoology was applied in late 19<sup>th</sup> century and earliest use in anthropology was found in American Anthropologist. As a separate discipline, anthropology is a scientific study of humans in all aspects. Anthropologists are well known for their ethnographic studies and biocultural approach. Ethnozoology is a multidiscipline structured with combinations of elements from both social and natural sciences. The researchers of various disciplines like Anthropology, Zoology and Botany can work together on Ethnozoological projects. Although Gregory Forth (2018) says that, Ethnozoology is primarily a division of anthropology,

scientist and scholars other than anthropologist have contributed to discipline, including zoologist, ecologist, pharmacologist, agricultural scientists and linguists.

Anthropologists are specialized in working with ethnic communities and capable to carry out Ethnozoological studies among various communities but sometimes they conducted research with zoologist and jointly published with zoologist for more acceptable and valid results.

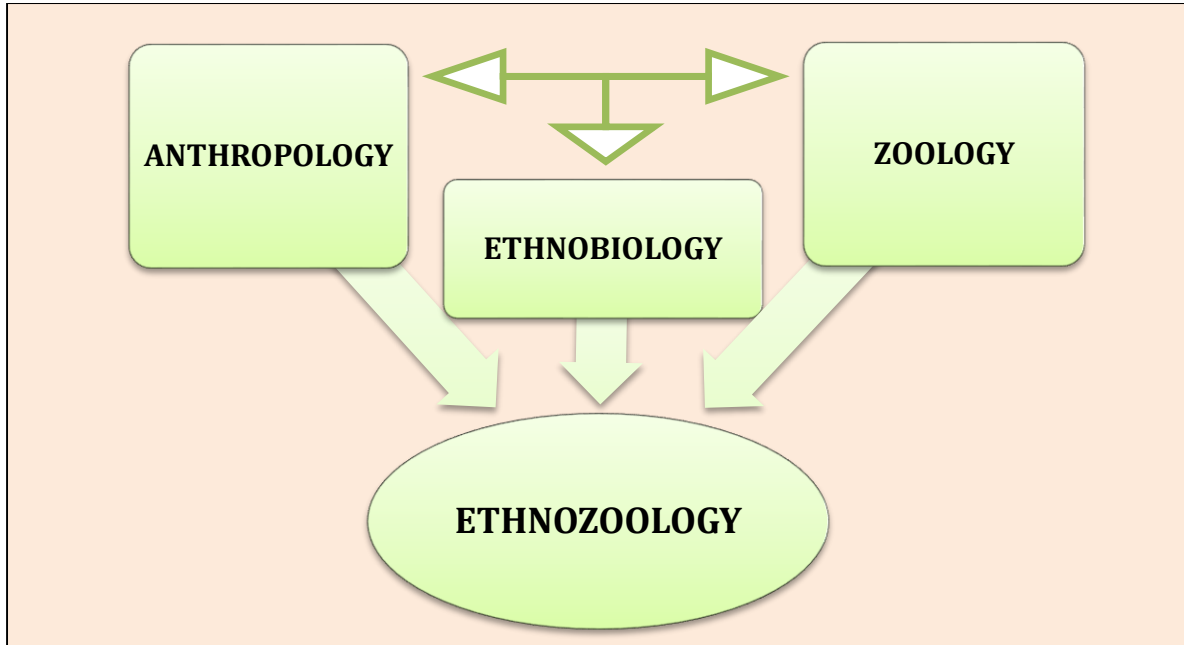


Diagram 1: Showing interface of Anthropology, Ethnobiology, Zoology and Ethnozoology

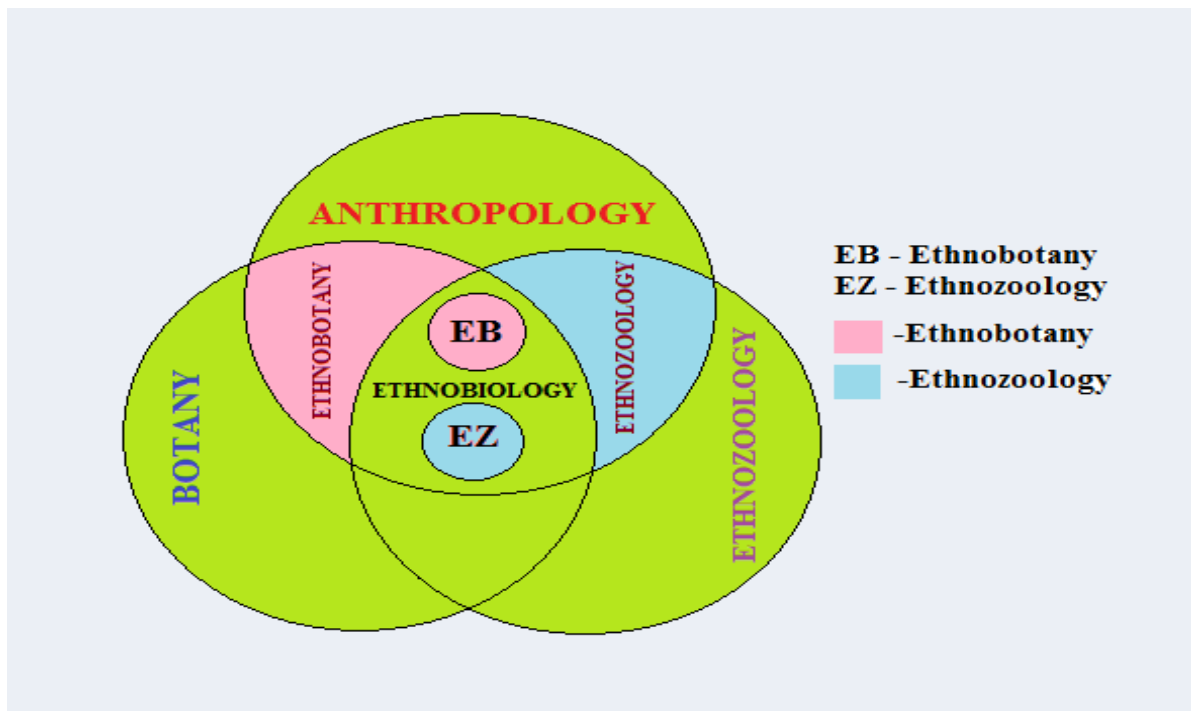


Diagram 2: Interface of Anthropology with Ethnobotany and Ethnozoology

Although bones of several species of animals have been found at the campsites of early man, but it is through his artistic creations that we know a lot about his relationship with animals. The oldest art belonging to the Upper Palaeolithic period, in the form of chattel objects or rock paintings, is therefore called 'Zoomorphic'. In the earliest phases, natural images of animals are found, whereas the depiction of human figures is very rare. In a hunting-foraging economy, animals were valued for their protein-rich meat, skin, bone, horn, and antlers. But they were not the sole items of their diet as there were many other easily available edibles in the forests. During the Proto-historic time, with the beginning of a sedentary lifestyle, animals were reared for their products, transportation, and farming. It was only during the Early Historic time that man enslaved animals and misused them even in the battlefield. All these stages of man-animal relationship from the Pre-historic time to Early Historic time are depicted in the art of the cave dwellers (Mathpal, 1984).

In ancient India, the Vedic literature, particularly Atharvaveda is a repository of traditional medicine including prescriptions in order to treat various diseases using animal by products. As per Indian history, as mentioned in *Rasa Granthas* (books dealing with mercury and snake venom), Hindus were pioneers in the use of snake venom in medicine. Few of the most important medicines prepared during the period from young and healthy black cobra, for the healing of sick humans and animals were: (1) *Suchikabharana* – a preparation of cobra venom containing mercury, sulfur, lead and aconite mixed in equal parts and soaked in the bile of rohu fish, wild boar, peacock, buffalo, and goat. This mixture was dried in a cool place and powdered. Administered in small doses (as “point of needle”), it was effective in a number of diseases such as plague, fever, coma, tuberculosis, etc.; and (2) *Ardhanarisvara Rasa* – It was prepared by mixing and *trituration* one part each of mercury, sulfur, aconite root, and borax. This mixture is then put in the mouth of black cobra and the mouth closed with mud. The head is covered with salt in earthen vessel. The pot is covered with mud and mild heat is applied constantly for 12 hours. The medicinal preparation is then triturated into fine powder for use as snuff for treatment of obstinate fever. Similarly, other medicinal agents, viz., *Brihat Suchikabharana*, *Aghorenrisingharana*, and *Kalanala Rasa* were also prepared with different snake venoms. (Somvanshi, 2012) Classical Ayurvedic texts like Charaka Samhita, Sushruta Samhita, Ashtanga Sangraha and Astang Hridayam Samhita are full of such medicinal formulations which were prepared of bones and various other parts of animals and aves and were applied in treatment of human diseases. (Mane & Gajarmal, 2019)

In the tradition of anthropological writing, there are several studies which emphasize the role of animal sacrifice while performing magico-logical performances during spiritual healing sessions. Tylor (1871), a famous British anthropologist, proposed his theory that sacrifice was originally a gift to the gods to secure their favour or to minimize their hostility. As part of belief system, sacrificial meal helped natives to bring communion among themselves as well as between them and their deity or supernatural forces. For Smith an animal sacrifice was essentially a communion through the flesh and blood of the sacred animal, which he called the “theanthropic animal”—an intermediary in which the sacred and the profane realms were joined. The later forms of sacrifice retained some sacramental character: people commune with the god through sacrifice, and this communion occurs because the people share food and drink in which the god is immanent. Sir James George Frazer, a British anthropologist and folklorist, author of *The Golden Bough*, saw sacrifice as originating from magical practices in which the ritual slaying of a god was performed as a means of rejuvenating the god. E.E. Evans-Pritchard, a social anthropologist at the University of Oxford, concluded after his study of the religion of the Nuer, a people in South Sudan, that for them sacrifice is a gift intended “to get rid of some danger of

misfortune, usually sickness.” They establish communication with the god not to create a fellowship with him but only to keep him away. (Retrieved from <https://www.britannica.com/topic/sacrifice-religion/Theories-of-the-origin-of-sacrifice>).

During ‘*Ladukaj*’ rituals performances observed by the Baigas and the Gonds, sacrifice of pig also symbolizes spiritual healing. Among the Nicobarese of Car Nicobar who believe in animism, *iyum* (soul), *huihe* (ghost), on the day of healing sessions, Shamans from Chowra island and *Tamiluono/Tattorong* (witch doctor) from Car Nicobar’s villages are called upon to identify the spirits responsible for a bad storm or an illness and to pacify them with rites that include the sacrifice of a chicken or a pig. Sacrifice of pigs (*haun*) was also religiously observed among the Nicobarese of Car Nicobar Island on the celebration of *KA-NA-HA-UN* and Ossuary feast. (Upadhyay and Patel, 2005)

Human-animal relationship is very old dating back to prehistoric time. This relationship could be traced back from *homo habilis* to Cromagnon and *Homo sapiens sapiens*. In one way or other human beings were associated to animals. Prehistoric evidences of bone Harpoons, Baton-de-Commandment, bone fish hooks, bone pins, bone awls, bone combs etc all elaborate a unique kind of story on human-animal relation. Human journey from palaeolithic hunter gatherer to food producers in Neolithic did not affect this interface between humans and animals. Animals were first hunted, then tamed and later domesticated.

Animal by-products were used as clothing, their horns, antlers, bones and nails were used as raw material for making different kind of tools and in different rituals to propitiate various forces of nature. Evidences of cave art from Altamira (Spain) and Bhimbetka (India) elaborately depict and attest this age old relationship between human beings and contemporary fauna.



Plate 1: Cave Paintings of Altamira Human- Animal interaction (Source:<https://www.ice-age-europe.eu/visit-us/network-members/museum-of-altamira.html>)



Plate 2: Prehistoric Paintings of Bhimbetka, Central India (Source: Corresponding Author, Pal: 2017)

From the above it is clear that the relation of animals with humans had a long history, which had been depicted by several paintings and sculptures of past. From that prehistoric period to till now, human is continuously in association with animals. Though, such relation has both negative and positive perspectives according to mental status of an individual (Srivastava and Tomar, 2019).

However, use of animal by-products as medicine is a learned skill which humans achieved through empiricism and oral traditions. Slowly and gradually this became inherent part of indigenous knowledge system of various societies-tribal-rural-urban; simple or complex.

Central India is well known for his ethnic diversity and splendid forest wealth incorporating thousands of species of flora and fauna. Madhya Pradesh is also a state of central India, which homes to diverse flora and fauna. These forests are also inhabited by many tribal groups numbering to 46 Scheduled Tribes including the Bhil, Gond, Baiga, Kol, Saharia, Bharia, Agariya etc. About 14.7% of the total tribal population of India resides in the state of Madhya Pradesh. The tribal population of Madhya Pradesh constitutes to 21% of total population of the state. 19 districts of the state are included in the category of tribal districts. One of the important district known as 'Dindori' (which is included in the study) is also enlisted in the category of tribal districts. The tribal district of Dindori is having the Baigas

and the Gonds as its majority population. They are famous for their ethnomedicinal knowledge as well as magico-logical performances. They use both flora and fauna in their traditional healing practices. Along with faunal resources, they also use various animal species for variety of purposes like food, as beast of burden and medicine. These interactions are the subject matter of Ethnozoology. Ethnozoological studies of, specially zootherapeutic study of Bajag forest range of central India can play very important role in new drug discovery, public health management and protect intellectual property right of the local communities and India.

### **About area and People:**

The state of Madhya Pradesh is centrally located and is often called as the “*Heart of India*”. Madhya Pradesh is home to a rich cultural heritage and has practically everything; innumerable monuments, large Plateau, rivers and miles and miles of dense forests offering a unique and exciting panorama of wild life in sylvan surroundings. Madhya Pradesh is famous for its wonderful art, craft, music and dance. Rich in geographical varieties, the state also has a good number of important mines that has a good influence on the economy of the country. Madhya Pradesh is the home land of many tribal groups.

### **Dindori District**

The history of the district is similar to Mandla district, because the Dindori district was formed in 1998 after bifurcating Mandla. The original name of the Dindori was said to be Ramgarh till 1951, which was also a tahsil of Mandla. Later on, the name of Ramgarh renamed as Dindori. Maurya, Sunga, and Kanva followed by the Chalukya and Chedis dynasties ruled over the central India. Later, the Haihayabansi’s kingdom also reined Garha-Mandla from 875 A.D. to 1042 A.D. After Baghel Raja of Rewa, Jodhe Rao Gond, a servant of king assumed the dignity of royalty. The Gond Jadurai became the first king of Garha-Mandla. (Census of India, 2015)

Till 1835, Mandla was a tahsil of Seoni. In 1851, it was promoted to the status of district. There were 18 talukas when Britishers got the land of Ramgarh. Out of 2089 villages, 1039 villages had become part of the Sohagpur and 1050 villages remained in Ramgarh. With the help of Rewa king, Britishers got killed the brave queen of Ramgarh and suppressed the 1857 mutiny in Mandla. The Sohagpur area of Ramgarh was handed over to the king of Rewa. The remaining area annexed to Dindori tahsil which become new district on 22<sup>nd</sup> May 1998. (Census of India, 2011)

### **General Characteristics of the District**

Dindori district is a tribal district of Madhya Pradesh state of India. Dindori district was created on 22<sup>nd</sup> May, 1998. Dindori district is part of Jabalpur Division. District is located on the eastern part of Madhya Pradesh, bordering the state of Chhattisgarh. Dindori touches Anuppur in east, Mandla in west, Umariya in north and Bilaspur district of Chhattisgarh State in south. It is 144 Km from Jabalpur on state highway-21, 104 km from Mandla and 88 km from holy place of Amarkantak. Dindori is located at 81.34° longitude and 21.16° latitude. The holy river Narmada passes through the district. Dindori is situated at a height of 1100 msl amongst herbal-rich Maikal mountain ranges. The district is covered in seven blocks namely Dindori, Shahpura, Mehandwani, Amarpur, Karanjiya, Samnapur and Bajag. (District administration website, 2010)

Dindori has many historical as well as spiritual places, some of the places of interest are-Laxman Madwa, Kukarra math, Jagatpur Ecotourism, Dagawna Waterfall, Karopani Deer

Park, Dev nala, Kaluchari kali Mandir, Ghughwa National Fossil Park, Chada Rural Tourism Destination, Tribal Folk Dance, Madai Festivals, Kapil dhara art Emporium. The Kanha Tiger National Park is 180 km and Bandhawgarh National Park is 140 km away from Dindori.

The Baiga are known as the “National Human”. Gond, Kol, Pardhan and Dhoba are other tribal groups which live in Dindori District.

### **Bajag Forest Range**

Bajag forest range is expanded in eastern part of the Dindori district. It is 56 km. away from district headquarter and situated in Maikal hills at the side of Jabalpur- Amarkantak National highway. The height of the forest is 885 ft. minimum from msl and 1100 ft. maximum from msl. In the east of Bajag forest, there lies Karanjiya range, in the west and south Samnapur range and in north Gadasarai (a part of Bajag range) range are situated. The Bajag forest range stretches between 22° to 22.50° North latitude and 81.15 to 81.20 longitudes. The total area of Bajag forest is 30,553 hectare. There are ten forest villages named Jalda, Bona, Khapripani, Khamera, Sheetalpani, Chada, Silpidi, Tantar, Tarach and Pondi. (Pal, 2019)

### **Ethnic Groups and their Culture**

Various tribal groups of Bajag forest range include Baiga, Gond, Kol, Dhoba, Agaria, Panika, Pardhan, Bharia, Laman or Nayak and one backward class Aahir. There are large numbers of Baigas who reside in the forest followed by Gond and Kol is the third largest community in the study area. The Kols reside outside the forest.

**Baiga:** The Baigas are also known as ‘Panda’ or traditional healers, The term/name ‘Baiga’ means a priest. They believe that they are the descendants of mother earth. According to another legend their community descended from a man called Naga Baiga. They are village priest and medicine men. The Baiga are below medium to short-statured with a long and narrow head shape and a flat nose. Their diet consists of uncultivated forest food like roots, fruits and tubers, as well as rice and kodo, kutki, makka, bajra. They are known vegetarians and eat pork. They eat pulses such as arahar, khesari and masur and the Pej-Bhaji is the most favorite food. They are fond of drinking local Mahua liquor. (Singh, 1994) According to K.S. Singh the local dialect, Parshi bhasa or Gavahi bhasa, a corrupt form of Hindi, is spoken by the Baiga. The Hindi language and the Devnagri script are used for inter-group communication. But the 1961 census reports their mother tongue to be ‘Baigani’, a dialect of Chattisgarhi language which belongs to the central group of the Indo-Aryan family of the languages. The Baigas are divided into seven sub groups, namely Bhumia, Binjhar, Bharotia, Nahar or Narotia, Bhaina, Kodwan, Mudia or Muria. The ‘Bhumia’ means owner of earth. They believe the god first made the Bhumia Baiga so they called him Bhumia. Many Baiga are land less, they often collect forest produce like forest timber, fire wood and fruits to sell in nearby markets. Census 2011 says that 51.4 percent of the total populations are worker. Of them 48.7 percent are main worker and 51.3 percent are marginalized worker. The Baigas are controlled by their own customary rules through a traditional council where the ‘Mukardam’ is head of such type of council and Diwan, Kotwar are there to assist him. This body can punish a person who breaks the norms of the society. The Bada Dev, Narayan Dev, Thakur Dev, Budhi Mai, Marani Mai, Khero Mai, Dulha Dev and Banjari Mai are the supreme deities of the Baiga community worshiped during time to time. They also worship their ancestors and the village deities are worshiped by Baiga Dewar. The most of the Baiga



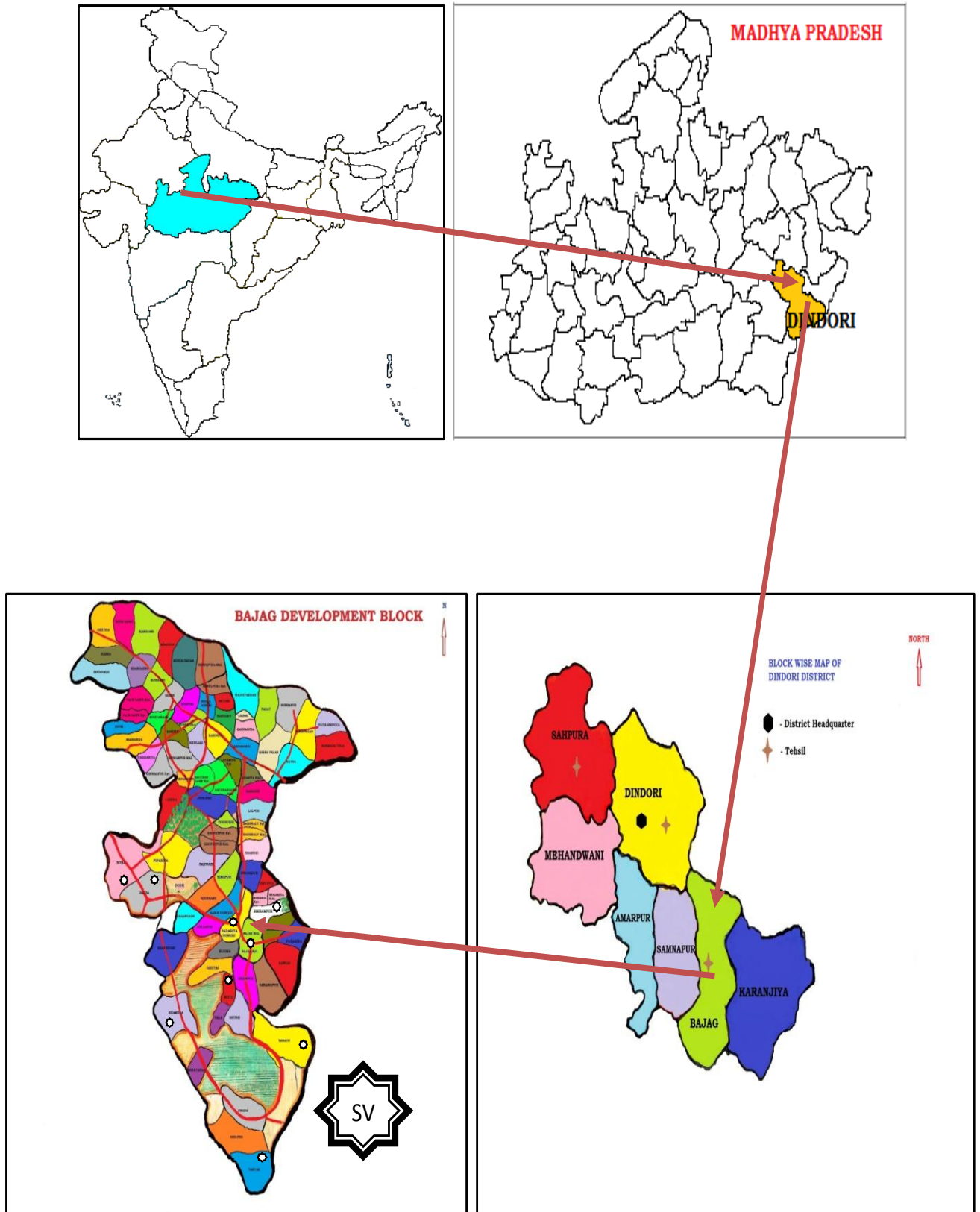
follow Hindu religion. The Narmda river is sacred for the Baiga and they called it 'Narabda Mai'. Holi, Diwali, Hareli, Pola, Navakhai, are their major festivals. Karma, Reena and Shaila are their traditional dance forms. The Baiga women decorate their bodies with tattoo marks.

**Gond-** The Gonds inhabit a contiguous geographical belt passing through Madhya Pradesh, Maharashtra, undivided Andhra Pradesh, Bihar, Jharkhand Karnataka, West Bengal and Gujrat, however, their original place of habitation is considered to be Bastar region of Chattisgarh alone. According to census 2011 the Gond tribe is the second most populous tribe in India. They got their name to Gondwana, a historical region which gained prominence during the medieval period. The Gonds established their political power, founded states and exercised influence far and wide. There were as many as four separate Gond kingdoms in the Gondwana region, mentioned in the medieval accounts which were bounded in the north by Panna district, by Ratanpur in Bilspur district in the east and by the Raisen district of Madhya Pradesh in the west; while southwards it spread towards the Deccan in Maharashtra and Andhra Pradesh. According to census of India, 1961, the derivation of the name Gond is unknown. In fact the Gonds call themselves 'Koitur' or 'Koi' and the name Gond was given to them by outsiders. According to some, the nomenclature of the Gonds, as of Khonds, is derived from the hills and in telugu Khonds are called as Gonds. The basis of the Gond economy is agriculture. They are called 'Kisan' in Mandla-Dindori region in central India. They use plough for farming. The main crops are kodo, kutki, paddy, jwar, makka, arahar, urada, masuri, batari, alsi ramtila etc. They also practice animal husbandry and the Gondi women play important role in husbandry. At present the Gond of central India are engaged in various economic and social operations simultaneously. They are also in government jobs, sports and active politics in central Indian region. Their mother tongue is Gondi, belonging to the Dravidian family of languages. The Gonds can speak Hindi, Gondi, Marathi or Telgu depending upon the place and situation. In the Mandla-Dindori they use eastern Hindi or Chhattisgarhi dialect for communication and some people use Gondi language for the communication within the community. The Gonds follow the traditional tribal religion; the name of the religion is 'Gondi' which subscribes to the 'Pharsa Pen' or 'Bada Dev' cult. In central India various Gond people follow Hinduism but some people called they are not Hindu, they are followers of Gondi religion.

**Kol:** Reference to the Kol is found in medieval texts such as Ram Charita Manas written by Tulsidas. It found its way into colonial literature in which not only the Austro-asiatic language speaking tribes like Munda and Ho but also the Oraon were labeled as Kol and their land as Kolhan. (Singh, 1994) They are distributed in Madhya Pradesh, Maharashtra and Oddisa with their major concentration in Madhya Pradesh; inhabiting the districts of Rewa, Jabalpur, Mandla, Dindori, Shadol and Damoh district. At the present, they speak a local dialect of Hindi and use Devnagri script for both and inter-and intra-group communication (Singh, 1994). The average Kol are below medium height and predominantly have long and narrow heads with a long or oval face and a moderately broad nose. They are the non-vegetarian; their staple food includes wheat, rice, jowar and different pulses. They consume alcohol which they purchase from market. The Kol mostly are landless and a large section of them work as laborers. The Kol are divided into several endogamous groups, they are monogamous, and patrilocal. They follow Hindu religion. 'Maharani Mai' is their supreme deity. They worship Shankar ji, Hanuman ji, Bada dev and Khero Mai too.



Plate 3: Showing picture of tribals residing in Bajag Forest range ( Top- A Kol couple,  
Bottom- A Baiga mother with her son)



Map 1: Locating Study Area (Bajag Forest Range) on map

## 2. RESEARCH METHODOLOGY

**Anthropological Fieldwork** applying qualitative research methods for the present study was conducted from October 2013 to January 2015. Interviews with key informants applying a semi structured interview schedule and focused group discussions were carried out extensively staying among the tribal population. Identification of fauna was done with the help of local people.

Demographic and Ethnozoological data of the study area was collected from 09 villages of Bajag development block and Bajag forest range of Dindori district. The selected villages were forest and revenue located in different gram panchayat while two nearest villages from block headquarter were also considered for the study.

### Sampling

The sample is multi-phase which consists of randomly selected 720 individuals from purposively selected 09 villages from Bajag tribal development block and Bajag forest range of Dindori district of Madhya Pradesh. From the 09 forest villages (04 gram panchayat) of Bajag forest range 05 villages, namely, Jalda, Bona, Khamera, Tantar, Tarach and 04 revenue villages namely Bajag, Padariya, Bikrampur and Midli, were purposively selected .

**Sample of the Study:** Two types of Sample were used for the Anthropological fieldwork which includes:

- Randomly selected individuals living in purposively selected villages of Bajag Tribal Development block of Dindori district of Madhya Pradesh.
- Traditional and Modern Medical Practitioners living in selected villages.

Traditional healers were sampled applying various techniques. A list of names of traditional healers was prepared with the help of village head (*sarpanch*), key informants and from the respondent by interview. A total of 126 traditional medical practitioners were identified but only 48 got ready to share the knowledge, so final sample included 46 traditional medical practitioners.

**Interview:** The interview method not only helped in collecting detailed information but also in depth information. Direct or open ended interviews were used by researcher. Interviews were conducted with the tribal males, females, traditional medical practitioner (*Guniya, Baidyas*), Traditional birth attendant (*Soon Mai*), Panda and Modern medical practitioners, local forest officers and guards etc. In depth interview were conducted covering personal and family information, situation and status of health and health seeking behaviors, illness affecting the family of target population.



Plate 4: Interviews with tribal people

Observation and Photography method were also used in present research work because photographs prove to be an asset to information that is written.

### 3. RESULTS AND DISCUSSION:

In study area, the tribal peoples are highly knowledgeable about the use of animal by-products and derivatives for treating various diseases as medicine. The study revealed the knowledge of treating ailments using different fauna and their products or derivatives by the tribals of the study area. The tribals of study area of Bajag forest range were using 26 animal species for the treatment of 23 diseases prevailing among them.

**Table1: Enumeration of Animals with their Medicinal uses**

S. No.	Local Name	Common Hindi Name	Common Name English	Scientific Name	Parts/products used	Treatment of Ailments
1	Asadhiya Sarap	Dhaaman	Indian rat snake	<i>Ptyas mucosa</i>	Bone	The bone of 'asadhiya saanp' a species of snake is used as locket for the treatment of Rickets in children.
2	Baag*	Baagh	Tiger	<i>Panther tigris</i>	Hair and nails	Used in rituals related to traditional healing.
3	Bhalu*	Bhaloo	Sloth bear	<i>Melursus ursinus</i>	Hair	Hair used in health related rituals.
4	Chamgadar	Chamgaadar	Flying fox	<i>Pteropus</i>	Feather	Ash is used to cure asthma
5	Chara	Kenchua	Earthworm	<i>Pheretima posthuma</i>	WA	Burn it and ash is mixed with old jiggery. Prepare small balls and given to lactating mothers.

6	Cheri	Bakari	Goat	<i>Capra indica</i>	Milk, intestine juice	Tribals used goat milk orally in typhoid and tuberculosis, intestine juice is used in ulcer.
7	Chawa	Chooja	Chick	<i>Gallus gallus domesticus</i>	WA	The use of chick in treating snake bite.
8	Ghongha	Naagar	Land Snail	<i>Helix aspersa</i>	Flesh	Boiled flesh is used in treatment of tuberculosis
9	Goru	Gai	Cow	<i>Bos indicus</i>	Ghee, abdominal stone, horn, milk, cranium	Cow ghee and abdominal stone is useful for the cure of asthma. The horn is also used as remedy for 'fitri' (mirgi) epilepsy. Cow milk + salt+ chilly also used by the tribals for the treatment of whooping cough.

10	Gwalin'	Laachha Khejra	Millipede	<i>Eurymerodesm us</i>	WA	The insect 'Gwalin' is used as anti- rabies; some amount of insect is cooked in the wood fire of peepal and given to the patient with bread.
11	Dongar Kukda	Jangali Murga	Wild Cock	<i>Gallus gallus</i>	Testis	The testis of jangli cock is used for the treatment of diarrhea, and it is also a remedy for male impotency.
12	Jonk	Jonk	Leech	<i>Hirudinaria graulosa</i>	WA	Ash is used with Ramteela oil for baldness.
13	Kechwan	Kachchua	Turtle	<i>Lissemys punctata</i>	Head	The roasted head of tortoise is use as remedy in leucorrhoea .
14	Kakda	Kekda	Crab	<i>Scylla serrata</i>	WA	Crab soup is useful in cure of asthma and typhoid



15	Kosa kida	Kosa Keet	Kosa insect	NA	WA	Insect burn with wool and ash and is used in cure of asthma.
16	Lakh	Lakh	Lac insect	<i>Kerria lacca</i>	WA	Powder is used in diarrhea
17	Madhu Makhi	Madhumakhi	Honey bee	<i>Apis cerana indica</i>	Honey	Honey is used in wound healing and cough and cold.
18	Makhi	Makhi	House fly	<i>Musca domestica</i>	Poop	Poop is used in <i>vimchi</i> (very small sized boils with water)
19	Marga*	Mor	Peacock	<i>Pavo cristatus</i>	Legs feather	The legs of peacock used for the treatment of ear pain; boiled with mustered oil and use as ear drop. Feather used in shamanic rituals.
20	Kukda	Murga	Cock	<i>Gallus gallus domesticus</i>	Faeces, WA	The fresh poop of cock is used as a anesthesia in tooth ache. Cock used in sacrifice for medical rituals.

21	Kukdi	Murgi	Hen	<i>Gallus gallus domesticus</i>	Egg	The eggs of hen are used externally for the treatment of dysentery in children.
22	Pareva	Kabootar	Wild Pigeon	<i>Columba livia</i>	Blood	Fresh blood used for the treatment of paralytic body.
23	Sambhar*	Saambhar	Chamois	<i>Rusa unicolor</i>	Antler	The ash of antler of sambhar mixed with dried zinger and powder is given to the patient of Asthma. Antler of sambhar is used for the treatment of pneumonia in children; rubbed with water and paste is applied on the chest of children.

24	Shahi	Shaahi	Porcupine	<i>Hystrix indica</i>	Spine	The spine of porcupine is used in stomach disorder; ash of spine is mixed with honey and given orally.
25	Shoora	Suwar	Pig	<i>Sus scrofa domestica</i>	Fat, Blood	Pig fat is applied in joint pain and fractures. Blood is used in tuberculosis
26	Siyaar	Siyar	Jackal	<i>Canis aureus</i>	Faeces	The faeces of jackal is boiled with water and use the preparation for the treatment of arthritis and rheumatism

WA- Whole animal, \*stopped using due to conservation

**Table 2: - Frequency claimed for ethno zotherapeutic uses for ailments**

S. No.	Name of Disease	No. of claim
01	Cough , cold	02
02	Rickets	01
03	Asthma	04
04	Lactation	01
05	Typhoid	02
06	Tuberculosis	03
07	Snake bite	01
08	Fits	01

09	Rabies	01
10	Diarrhea	03
11	Male impotency	01
12	Baldness	01
13	Leucorrhoea	01
14	Small boils	01
15	Ear ache	01
16	Tooth ache	01
17	Dysentery	01
18	Paralysis	01
19	Pneumonia	01
20	Fractures	01
21	Arthritis	01
22	Medical Rituals	04
23	<b>Total</b>	<b>34</b>

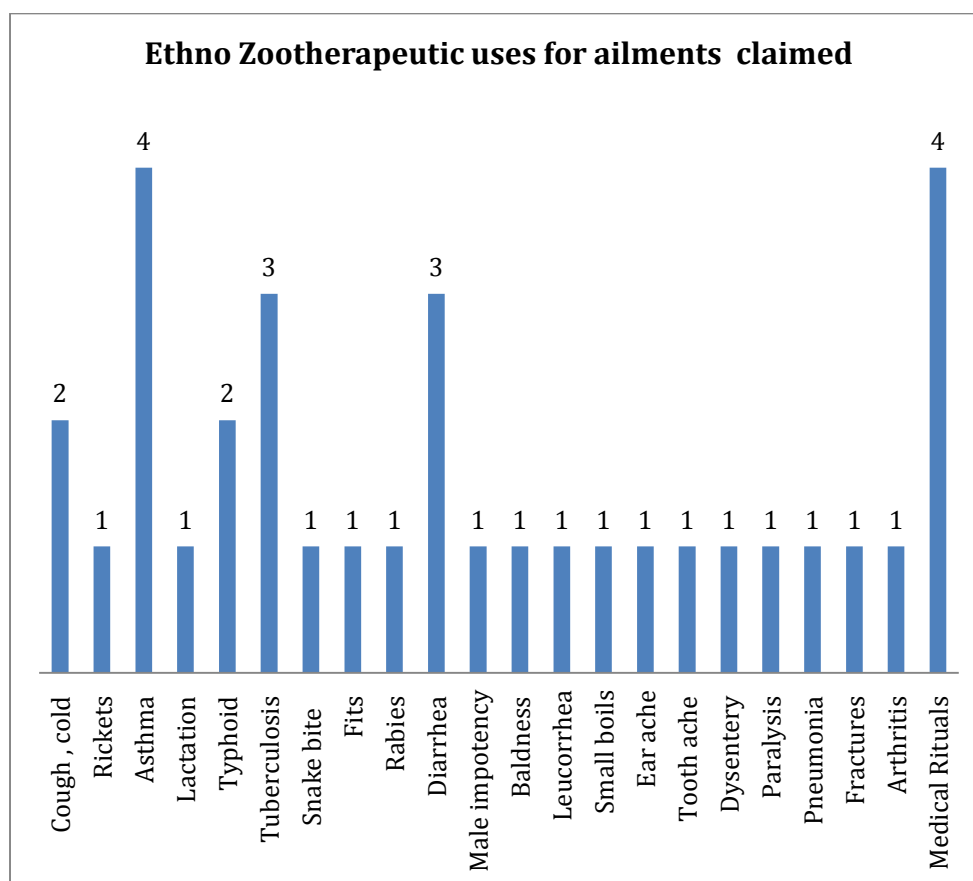


Figure 1: Frequency claimed for ethno zootherapeutic uses for ailments

Total 34 claims are recorded in this study. Maximum claims are noted for asthma (04) followed by diarrhea, tuberculosis (03-03). Cough and cold and typhoid claims are reported as 02-02 numbers. Rest ailments are only single, single claims. Four Zootherapeutic uses are acclaimed for traditional medical rituals.

**Table 3: Parts Used**

S. No.	Parts	No.
01	External	08
02	Internal	06
03	WA	09
04	Byproducts	06
05	Total	29

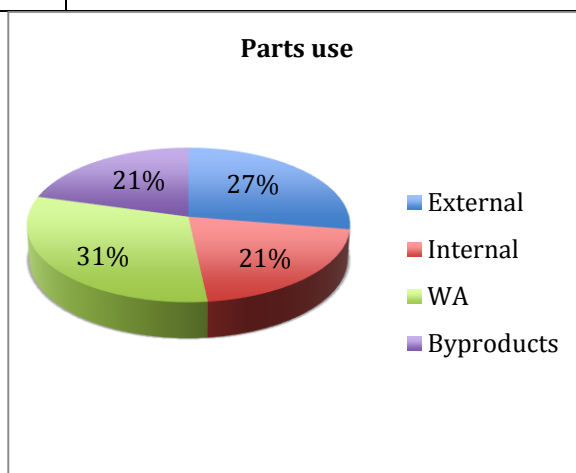


Figure 2: Parts used

Total 29 parts are used out of which 08 parts belong to external, and 06 parts are internal which are used as a medicine, 06 by-products include materials milk, honey and stool etc. Total 09 claims used whole animal as medicine.

**Table 4: Categorized according to types of animals**

S. No.	Category	No.
01	Domestic	07
02	Non domestic	19
03	Total	26

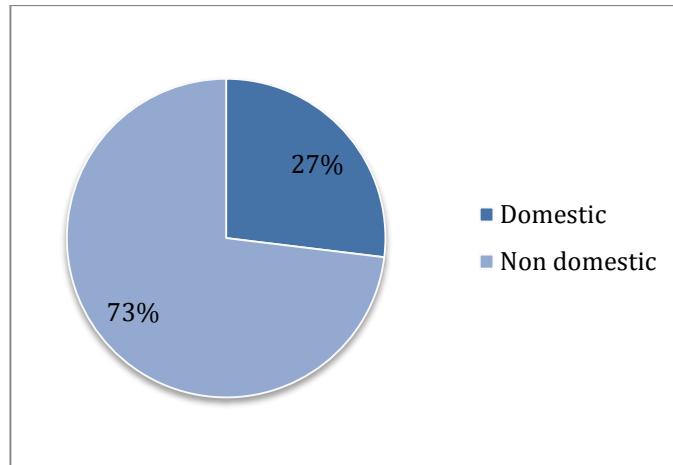


Figure 3: Categorized according to types of animals

Total 07 species are domesticated by the tribals of the study area constituting almost 27 percent. Rest 19 species are non domesticated and wild animals.

**Table 5: Classification of Animals as vertebrate and invertebrate**

S. No.	Classification	No.
01	Vertebrate	17
02	Invertebrate	09
03	Total	26

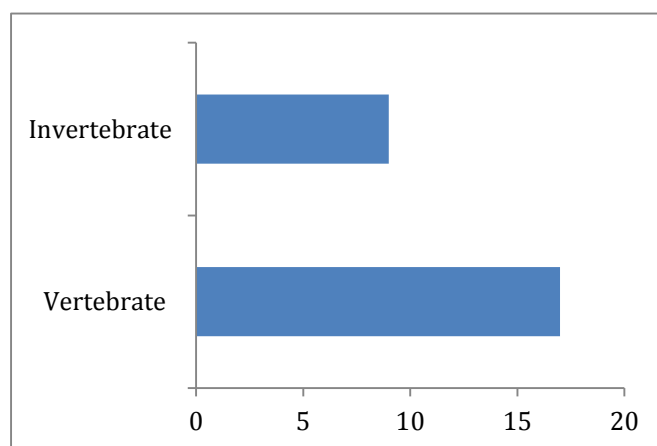


Figure 4: Classification OF Animals as vertebrate and invertebrate

Total 17 animals belong to vertebrate category and 09 belong to invertebrate.



(5) Goru



(6) Soora



(7) Kakda



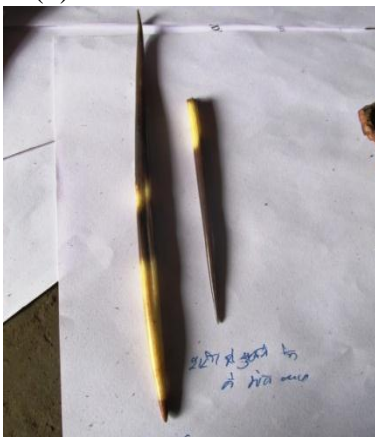
(8) Part of Cow horn



(9) Jungli murge ka pota



(10) Kosa kida



(11) Spine of Purcupine



(12) Cow cranium



(13) Gwalin

Plate 5-13: Some images of fauna and faunal parts used by local peoples



Plate 14: A Traditional Healer showing cow horn

#### 4. DISCUSSION AND CONCLUSION

Study reveals that various parts of body of animals and aves and their by-products are used by the Baigas, Gonds and Kols of the Bajag forest range of Dindori district of Madhya

Pradesh. The study enlists 26 such kinds of zootherapeutic medicines/ faunal by-products which are applied in treatment of 23 diseases prevailing among the studied populations. Some faunal by-products are also used in spiritual aspects of healing and in sacrifices, propitiation of deities too. Tribals emphasised that they do not kill animals for their by-products but they gather these from animals that meet natural death. Also, they reiterated that they never attempt to kill those animals which are protected animals. They informed that they collect feathers of peacock from forest which are shed by it. Nails of tiger and bear are rare items. Horns are bovines and their skeletal remains are received from dead animals.

Though the studied populations are using zootherapeutic/faunal by-products as medicines for treating various kinds of ailments but these constitute to only 10 percent in comparison to plant based medicines/herbal medicines. Hence, it may also be drawn from the study that there is urgent need to undertake such kind of ethnozoological studies throwing away the conservative approach to them. This will on one side help in digitalization and documentation of zootherapeutic/ethnozoological remedies on the other, it will help in conservation of various species of animals. However, more scientific researches are required regarding animal based medicine with utmost cautions related to zoonotic diseases. Conservation of both indigenous knowledge related to zootherapeutic/ethnozoological remedies and traditional knowledge of tribals which are vanishing with very high pace require urgent attention.

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