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# An ethnozoological investigation at tropical wildlife forest areas located in Araku, Jangareedy Gudem and Mylavaram Forests of Andhra Pradesh

**Anthumary Kondaveeti *, Dr. Manoj Singh**

*Research Scholar, Dept. of Zoology, Kalinga University, Chhattisgarh & Principal of Atkinson Senior Secondary School, Vijayawada-1, Andhra Pradesh

HOD Department of Zoology, Kalinga University, Chhattisgarh

***Corresponding Author:** Anthumary Kondaveeti

*E-mail: anthumary.74k@gmail.com

Email: msingh.zooku@gmail.com

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**ABSTRACT**

The present study examines the ethnozoological techniques employed by the Bagata, Gadaba, Koya, Savara of Araku; Kondareddies, Kondakammara, Konda Dora, Kondakapu, Valmiki of Jangareedy Gudem; Yerukula, Dabba Yerukula , Nakkala, Sugalis, Koya Mukha Doras, Yenadis, Lambadis, Chenchus, Lambadi Banjaras of Mylavaram Forests of Andhra Pradesh, specifically focusing on the utilization of various animal products and their derivatives for medicinal purposes. This study aims to provide a comprehensive understanding of the utilization of 23 animal species, which have been identified as folk medicine within the local tribal population. A field survey was undertaken, using interviews and a standardized questionnaire, which unveiled the utilization of 23 species for the treatment of several ailments. The zootherapeutic expertise that has been passed down through generations primarily relies on the utilization of domestic and wild animals as significant sources of medicinal substances. It is recommended that this type of information might be valuable in preserving life during emergencies. The report also highlights the ways for conserving and managing faunistic resources. The ethnozoological practice emphasizes the necessity of enhancing traditional knowledge of zootherapy in order to explore new avenues in pharmaceutics.

## INTRODUCTION

Zootherapy refers to the use of medicinal substances derived from animals to treat human illnesses. In contemporary times, zootherapy represents a significant option within the realm of several established therapeutic approaches worldwide. According to the World Health Organization (WHO), around six billion individuals largely depend on medications derived from animals and plants. Ancient humans possessed a diverse range of natural pharmacopoeia, which encompassed several types of wild plants and animals. The inventory of therapeutic compounds obtained from animals and their bodily parts has been widely employed by mankind since ancient times, and these techniques continue to exist in traditional medicine. Wild plants and animals are utilized not only in traditional medicine but also as raw materials in the production of contemporary medications and some herbal concoctions. Only a limited amount of research has been conducted in the field of ethnozoology .Hence, this study aims to document the significance of animal products and their efficacy as medicinal remedies within the local tribal population. The utilization of animal products as traditional medicine has been found among the tribal groups live in the area of Araku, Jangareedy Gudem; Mylavaram Forests of Andhra Pradesh, The research not only highlights the prominent characteristics of the tribal people's lifestyle in Araku, Jangareedy Gudem; Mylavaram Forests of Andhra Pradesh, but also aims to document the traditional nature healing system and proposes a plan to preserve these creatures for future generations.

**Methodology :**

A survey was carried out at the Araku, Jangareedy Gudem; Mylavaram Forests of Andhra Pradesh wildlife reserve during Aug 2022-23. The informants primarily consist of elderly individuals residing in the villages, ranging in age from 40 to 75 years. The individuals providing information were participants who were local herbalists, healers, farmers, and midwives residing in the forest areas are region. The selection of informants was conducted with great care, ensuring that the specialists have extensive information regarding the medicinal significance of animals, which they had learned from their parents. The informants were also requested to furnish the indigenous names of the animals utilized in traditional medicine, followed by the identification of their scientific names. These animal species were subsequently recognized as. The study comprises inquiries pertaining to the use of animals, including insects, their components, and the goods employed in traditional medicine.

| Phylum | Class | Family/Order | Genus/Species | Common name | Uses |
|---|---|---|---|---|---|
| Arthropoda | Arachnida | Scorpionid-ea | *Palamnaeus Swammerdami* | Scorpion | Whole animal is boiled in edible oil on Saturday (an auspicious day); oil is used to cure piles. Scorpionstings are used on bullock galls, which are healed within 2-3 days; scorpion ash is used to heal wounds. |
| | Chilopoda | Myriapoda | *Spirobolus* | Millipede | Dry millipede smoke is used to treat piles. |
| | Crustacea | | *Cancerparanus* | Crab | Meat is used for the blood born diseases. |
| Chordata | Amphibia | Ranidae | *Rana Tigrina* | Frog | Frog boiled in oil is used to heal wounds caused due to burns. |
| | Reptilia | Squamata | *CalotisVersicolor* | Garden lizard | Whole animal is boiled in oil; oil is applied to healwounds of cattle. |
| | | | *Viperarusselli* | Snake | Meat is believed to improve eye sight & facilitates urination, stool and flatus. Skin is often fed to cattle to cure foot & mouth diseases. |
| | | | *Varanusbengalensis* | Monitor lizard | Meat promotes strength and virility. Fat is used for joints pain. |
| | Aves | Strigiformes | *Strixaluconivicola* | Owl | Meat promotes strength and virility. |
| | | Columbidae | *Columba livia* | Pigeon | Meat of a black pigeon is given to patients suffering from paralysis. |
| | Mammalia | Leporidae | Lepusnigricollis | Hare | Blood of rabbit is used to cure asthma. |
| | | Equidae | Equasequas | Ass | Meat promotes strength and virility; cures bronchitis. |
| | | Felidae | Pantherapardus | Leopard | Meat promotes strength and virility. Bones are used as aphrodisiac; Ash of burned hair is applied to treat foot and mouth diseases. Fat is used as massaging oil for body pain. |
| | | Bovidae | Bosbubalus | Buffalo | Meat promotes strength, virility and physique. |
| | | Cervidae | Muntiacusmuntjak | Barking deer | Meat is used to promote strength and virility; good cardiac tonic. |
| | | Rodentia | Rattusrattus | Rat | Meat promotes production of semen. |
| | | Cercopithecidae | Macacamulatta | Monkey | Meat is used to cure asthma, rheumatism, anaemia; develops resistance against parasitic infections. |
| | | Bovidae | Capra falconeri | Goat | Meat is believed to stimulate digestion and cures rhinitis. |
| | | Lagomorpha | Oryctologusouiniculus | Hare | Meat is given to cure menstrual disorders. |
| | | Canidae | Canis aureus indicus | Jackal | Meat is used to cure asthma, paralysis, and arthritis. |
| | | Bovidae | Bosgrunniens | Yak | Raw yak hair keeps away unholy spirits. |
| | | Moschidae | Moschusmmoschiferous | Musk deer | Musk is used for curing malaria, heart ailments, and eye fever. The lactating mothers are given a pinch of *kasturi*, a product from musk to promote immunity. |
| | | Felidae | Felisdomesticus | Cat | Meat cures arthritis. |
| | | Hysticidae | Hystixindica | Porcupine | Dried stomach and intestinal parts (along with fecal matter) are given to children suffering from digestive disorders. |

**Findings of the study:**

The Forest areas situated respectively i.e Araku,18.3222° N, 82.8802° E; Jangareedy Gudem 17.1205° N, 81.2983° E and Mylavaram 16.7560° N, 80.6414° E of Andhra.

The climate is consistently hot throughout the year. During the summer season, the temperature frequently exceeds 43 °C. The primary origin of precipitation is derived from the South-west monsoon. The mean annual precipitation is around 1,000 millimetres. The Araku, Jangareedy Gudem and Mylavaram Forests of Andhra Pradesh is recognized as one of the most ancient forests in the state of Andhra Pradesh.

The forest encompasses a total land area of 806 square kilometers.

The forest areas are mostly populated by dense teak trees and several other types of flora.

The forest areas are have a diverse range of herbivorous and carnivorous animals, in addition to a wide array of bird fauna.

The forest comprises Southern tropical dry deciduous teak and its associated flora, such as Thiruman, Maddi, Bamboo, and

others. Additionally, the animal population in the forest includes several endangered species, including tiger, sloth bear, four-horned antelope, chinkara, black buck, and a variety of others. Within the forest areas are, individuals from various tribes and semi-nomadic tribes, such as Bagata, Gadaba, Koya, Savara of Araku; Kondareddies, Kondakammara, Konda Dora, Kondakapu, Valmiki of Jangareedy Gudem; Yerukula, Dabba Yerukula , Nakkala, Sugalis, , Koya Mukha Doras, Yenadis, Lambadis, Chenchus, Lambadi Banjaras of Mylavaram Forests of Andhra Pradesh, reside and utilize a diverse array of biological resources present in the forest areas are. The Koya tribe, which has been residing in the forest areas are since ancient times, as well as other non-tribal groups such as the Lambada, Harijans (Mala & Madiga), and Taddy tappers, were also there. During the rainy and winter seasons, they engage in agricultural activities such as cultivating paddy and maize, which account for over 50% of their food needs. In the summer, they engage in hunting for wild animals, birds, and fish. In addition, they gather animal goods such as honey and lac from the forest. Another migratory tribe, known as the Gutti Koya, is also present in the region, originating from the neighbouring state of Orissa. They reside in the central region of the forest and sustain themselves by the hunting of wild animals and the gathering of animal goods from the forest. The animals in the refuge experiences significant disruption as a result of their activities.

Therefore, it is imperative to initiate the process by creating comprehensive inventories of this knowledge base. The inclusion of animals with ethnobiological significance is crucial not only for assessing the interconnections between humans and plants, but also for comprehending the regional dynamics between humans and the environment.Wild and domestic animals, as well as the by-products of different animals such as hooves, skin, bones, feathers, and tusks, are utilized as components in the creation of medicinal items that are therapeutic, protective, and preventative. The study conducted in the wildlife forest areas are documented a total of 23 species, including 14 mammals, 2 birds, 3 reptiles, 1 amphibian, and 3 insects. These animals are utilized by the local tribes for the treatment of various maladies (Table 1). There are 12 families of animal species that have been documented for their medicinal properties. These species are used to treat approximately 17 different diseases or health disorders. However, it is believed that mammalian meat can enhance strength, virility, and particularly increase sexual vigor in men.

Various animals are being employed for the purpose of treating wounds, foot and mouth diseases, gastrointestinal problems, arthritis, asthma, paralysis, and malaria. Out of a total of 23 species, only six species exhibited multifunctional use. Understanding the utilization of animal species is a crucial aspect in the preservation of wildlife, given the ongoing decline in their population. Given the limited knowledge on their utilization in medicine and other applications, it is crucial to document this information and establish a database to preserve these significant species. In instances where rare and endangered animal species are utilized for medicinal purposes, it is imperative to implement appropriate measures to ensure the sustainable population of these species. Failure to do so may result in the overexploitation of these animals, ultimately leading to their extinction over time.

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