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Ethno-Zoological Knowledge Among Rural Communities of Shekhawati:Traditional Uses of Animal Resources in Folk Medicine

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Abstract: ***Ethno-zoology is an important branch of ethnobiology that explores the cultural, medicinal, and symbolic relationships between humans and animals. The Shekhawati region of Rajasthan—covering the districts of Jhunjhunu, Sikar, and Churu—possesses a rich heritage of traditional ecological knowledge. This study documents the ethno-zoological knowledge of rural communities, pastoral groups, traditional healers (Bhopas, Naths, Jogis), and pansari families who use animal-derived substances for therapeutic and cultural purposes. Using ethnographic surveys, semi-structured interviews, and participant observation, data were collected from 26 villages. The study identified 42 animal species whose parts or by-products—such as fat, milk, skin, bone, feathers, honey, and secretions—are used to treat 34 human ailments, ranging from bone fractures to respiratory infections. The research highlights how traditional animal-based remedies continue to play a role in rural healthcare, despite modernization. It also emphasizes the urgent need to conserve both biological resources and indigenous knowledge systems. Recommendations include documentation, awareness programs, sustainable harvesting, and integration with modern veterinary and public health frameworks.***

Keywords: Ethno-zoology, Shekhawati, Rajasthan, traditional medicine, folk healing, animal-based remedies, pastoral communities, biocultural knowledge.

1.1 Introduction

Ethno-zoology investigates how humans utilize and perceive animals for food, medicine, rituals, and material culture. In India, traditional medicinal systems such as Ayurveda, Siddha, Unani, and folk practices have long recognized animals as sources of healing substances. Rural societies maintain a close relationship with local fauna, integrating animals into their belief systems and healthcare practices.

The Shekhawati region of Rajasthan is culturally unique, known for its semi-arid climate, pastoral economy, and strong adherence to folk traditions. Communities such as Rajputs, Jats, Kumhars, Meghwals, Nais, Brahmins, Lohars, and especially pastoralists like Raikas, Mehrats, and Maliyas retain ancient ethno-zoological knowledge. Pansari families—traditional sellers of medicinal items—have historically served as custodians of indigenous remedies involving both plants and animals.

Despite rapid modernization, rural households still rely on animal-based preparations for treating fractures, skin diseases, burns, fever, joint pain, eye infections, infertility, and other ailments. Documentation of this knowledge is crucial because such practices are rapidly disappearing due to urbanization, youth migration, erosion of traditional occupations, and declining wildlife populations.

This research aims to comprehensively document ethno-zoological practices in Shekhawati, analyze their cultural significance, assess their therapeutic value, and recommend strategies for preservation and sustainable use.

1.2 Objectives

1. To identify animal species used in traditional folk medicine in the Shekhawati region.

2. To document preparation methods and therapeutic uses of animal-derived substances.

3. To analyze the socio-cultural role of ethno-zoological knowledge among rural communities.

4. To evaluate the sustainability and ecological implications of animal-based remedies.

5. To provide recommendations for conservation of indigenous knowledge and wildlife resources.

1.3 Methodology

I. Study Design

The study followed a descriptive ethnographic design, integrating both qualitative and quantitative data.

II. Data Collection

Semi-structured interviews with 92 informants (aged 30–90) including:

1. Traditional healers (Bhopas, Naths, Jogi herbalists)

2. Pansari practitioners

3. Pastoral communities (Raikas, Jats)

4. Elderly villagers

5. Participant observation during healing rituals, livestock management, and preparation of remedies.

6. Field visits to desert habitats, grazing lands, wells, agricultural fields, village ponds, and cattle sheds.

7. Photo documentation and vernacular name recording.

III. Sampling

Villages were selected from Jhunjhunu, Sikar, and Churu districts using purposive sampling. Informants were chosen based on known expertise in traditional healing.

IV. Data Analysis

1. Species identified using zoological manuals.

2. Uses categorized by ailment type.

3. Cultural significance assessed through thematic analysis.

4. Sustainability evaluated through ecological literature review.

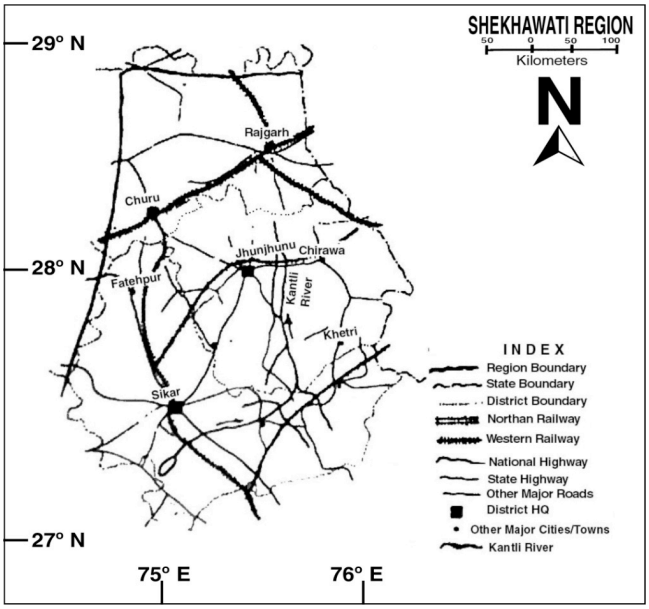
1.4 Study Area

Figure-1.1 shows the area under study i.e. Shekhawati region which is located in the north-eastern part of Rajasthan state and the region has geographical extension from 26°26' to 29°20' N latitude and 74° 44' to 76°34' E longitude on the map of Rajasthan. The area under study covers fully or partly three districts, namely Churu, Jhujhunun and Sikar. Churu district's out of 7, only 3 tehsils fall under Shekhawati region (Churu, Rajgarh and Taranagar) whereas Jhunjhunu district as a whole with its six tehsils (Buhana, Chirawa, Khetri, Jhunjhunu, Nawalgarh and Udaipurwati) in which Buhana tehsil emerged out as a new tehsil on the map of Jhunjhunu district (2001), it was no more existence in the year of 1991 and Sikar district also covered fully with it's six tehsils (Data Ramgarh, Fatehpur, Laxmangarh, Neem ka Thana, Sikar and Shri Madhopur). The region has 23 Panchayat Samitis in all. Thus, the region under study has 15 tehsils in total with it's total 15343 sq. km. geographical area which makes 5.6% of the state's total. At the part of district-wise contribution by area point of view in Shekhawati region it is observed that part and portion of Churu district contributes 29%, Jhunjhunu district contributes 31% and Sikar by 40%, respectively.

Among these tehsils area point of view, the tehsil of Churu is largest one and Buhana smallest, respectively. District-wise area point of view Sikar stands at first position which is followed by Jhunjhunu and lowest contribution is made by Churu i.e. 1683 sq. km. only.

At the part of population, Shekhawati region contributes 8.7 percent of the state's total in which sex-ratio is 948 females per thousand males in Total Population whereas it is very low i.e. 887 in Child Population for the area under study. The region obtains high Literacy rate which is about 10% more than that of the state's average. Among tehsils, Buhana ranks at first position while as Neem ka Thana contributes lowest in this aspect.

Figure- 1.1 Location Map of Shekhawati Region



The region obtains high density (244) i.e. 50 percent more than that of state's average which is 165 persons per sq. area 2001. The region has also Slum population but it is very low or to say negligible i.e. 2.5% only of the urban area's total.

The whole region has distribution of two types of soils; Sandy soil and Red Loamy soil. The former soil type has obvious distribution in Churu district, the areas of sand dunes topography; the later soil group is mostly distributed over the districts of Jhunjhunu and Sikar (classification based on dominancy, availability and agricultural productivity). The distribution of soil type and it's physical as well as chemical nature is a significant aspect from vegetation as well as plant species distribution point of view.

On the basis of another type of soil type classification according Prof. Thorpe and Smith based on the origin of the soil, the observations revealed in this direction that Remosols type of soil has distribution in the areas of sand dunes topography; all three tehsils of Churu districts have, Red sandy soil which is more alkaline in nature. Hilly topography soil and Riverine soil have their distribution according the distribution of habitat of study area.

1.5 Observations

I. Animal Species Used

A total of 42 species were recorded, including:

1. Mammals (14) – Camel, goat, cow, sheep, donkey, nilgai, jackal, hedgehog, bat, etc.

2. Birds (11) – Peacock, hen, pigeon, vulture, owl, crow, quail, etc.

3. Reptiles (9) – Snake, monitor lizard, turtle, gecko, sand boa, etc.

4. Insects (6) – Honeybee, termite, red ant, etc.

5. Fish & Amphibians (2)

II. Commonly Used Animal Products

1. Milk, ghee, curd

2. Fat and bone marrow

3. Blood (rare, mostly ritualistic)

4. Honey and wax

5. Feathers and skin

6. Eggshells

7. Horn and hoof powder

8. Snake slough

9. Camel urine (traditional use)

III. Primary Ailments Treated

1. Bone fractures

2. Joint pain

3. Snakebite

4. Cough, cold, chest congestion

5. Infertility

6. Skin diseases

7. Burns and wounds

8. Tonsillitis

9. Eye infections

10. Digestive troubles

IV. Common Preparation Techniques

1. Paste (Lepa)

2. Decoction

3. Smoking/inhalation

4. Heating (for fats and bone marrow)

5. Ash preparation (Bhasma)

6. Ghee-based formulations

7. Direct application on skin

1.6 Discussion

I. Cultural Importance

Animal-based remedies are embedded in Shekhawati's socio-religious life. Many practices are linked with:

1. Folk god traditions

2. Pastoral economy

3. Ritual healing

4. Seasonal festivals

5. Household veterinary care

6. Animal products are considered powerful because they represent vitality (prana), strength, and natural immunity.

II. Medicinal Significance

Many traditional remedies show pharmacological potential:

1. Camel milk – anti-diabetic, anti-inflammatory

2. Goat milk – digestible for infants

3. Bone marrow fats – used for fractures and joint healing

4. Honey – antibacterial

5. Peacock feathers smoke – believed to reduce asthma symptoms

6. Termite mound soil – used for wound healing

7. Monitor lizard fat – traditionally used for joint pain

8. Scientific validation is needed, but many remedies show bioactive properties known in ethnomedicine.

III. Sustainability Issues

Several practices pose ecological risks:

1. Hunting of reptiles

2. Use of owl body parts

3. Exploitation of monitor lizards

4. Decline in honeybee populations

5. A shift towards sustainable alternatives is required.

IV. Knowledge Erosion

Younger generations are abandoning traditional occupations and healing practices due to:

1. Formal education

2. Urban migration

3. Loss of pastoral lifestyle

4. Wildlife protection laws causing fear

5. Less documentation

6. Rising influence of modern medicine

Thus, knowledge transmission is becoming weak.

1.7 Results

1. 42 species recorded with therapeutic uses

2. 34 ailments treated using animal-based remedies

3. Practices vary across caste groups—Raika, Jat, Pansari, and Bhopa groups are primary knowledge holders

4. Many remedies have scientifically supported bioactive properties

5. Unsustainable practices identified in 7 species

6. Women and elderly individuals are the primary transmitters of knowledge

7. Integration with Ayurveda and home remedies is common

1.8 Conclusion

Ethno-zoological knowledge in the Shekhawati region represents an invaluable biocultural heritage. Despite changes in lifestyle, traditional healers continue to rely on animal-derived substances for medicinal and ritual purposes. The study reveals a wide spectrum of species used for treating a broad range of ailments. However, conservation issues, knowledge erosion, and lack of documentation pose serious threats. There is an urgent need to preserve this heritage through scientific validation, community

participation, and sustainable resource management. Revitalizing ethno-zoological knowledge may contribute to rural healthcare resilience and biodiversity protection.

1.9 Recommendations

1. Documentation Programs – Traditional healers' knowledge should be systematically recorded.

2. Awareness Campaigns – Educate communities about wildlife conservation laws.

3. Sustainable Use – Ban harmful practices (e.g., hunting owls, reptiles).

4. Research Collaboration – Encourage partnerships between universities, Ayurvedic institutions, and local communities.

5. Community Training – Train youth in safe, ethical ethnobiological practices.

6. Integration with Public Health – Promote validated, safe remedies for rural healthcare.

7. NGO Role – Local trusts (e.g., Eco Development Society) can lead conservation and documentation initiatives.

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