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STUDY OF ETHANO-MEDICINAL PLANTS OF ESGAON AND CHINTHAGUDA TRIBAL AREAS IN KUMURAM BHEEM ASIFABAD DISTRICT, TELANGANA, INDIA

Usha Rani Kollu [1], Dr. K. Kalpana [2], Dr. T. Annie Sheron [3] and M. Praveena [4]
[1-4].Department of Botany, Government Degree College for Women, Begumpet, Hyderabad

Abstract

The present study was carried out during the months of January to July in year 2024 to document and analyse traditional usage of medicinal plants by local tribal areas where indigenous people use them for prevention and treatment of various ailments. Standard questionnaire were prepared and interviewed traditional healers and local people of Esgaon and Chinthaguda tribal areas in Kumuram Bheem Asifabad district, Telangana state of India. Thorough investigation, observations interaction and interviews with local tribes of the selected areas detail data were documented on about various traditional medicinal plants usage. Total of 49 plant species belonging to 31 families data were documented based on indigenous uses since long. Many ethno-medicinally useful plants species such as *Maredu, Tuniki, Tangedu, Nallathumma, Gunugu, Uttareni, Jammi, Billaganneru*, *Madhuca, Kanuga, Amudham, Neem* etc grow in these are of their life. This study also helps to deal and understand with the ways in which how different societies and cultures have practised to perceive, know, use, classify, and symbolically represent plants in their daily lifestyle and routine.

Key Words: Ethnobotany, Indigenous, Medicinal, Traditional, Tribe.

INTRODCUTION

India, with its vast geographical and cultural diversity, is home to numerous indigenous communities that have traditionally depended on their natural surroundings for survival. The indigenous knowledge systems of India, passed down through generations, hold immense value especially in biodiversity conservation, preservation of traditional medicinal practices, and development of modern medicine. Ancient texts such as the *Atharveda*: *Sushrutha Samhita*, *Charaka Samhita* and *Astanga-Hridaya* offer early documentation of plant-based knowledge, reflecting a sophisticated understanding of local flora. These traditional systems laid the foundation for much of India's historical and contemporary herbal medicine. The majority of people in traditional communities rely on plant-based medications, and traditional health care workers are the primary source of health care. Ethnobotany has long been important in the development of innovative medications, and it is becoming increasingly important in the development of strategies and measures for residual forest conservation and recovery (Manju and Tasavur Ahad 2021).

Asia is a very popular global centre due to its ancient written traditional knowledge regarding the use of medicinal plant species for treating various ailments as mentioned in Ayurveda, Unani and Chinese traditional system of medicine (Kala *et al.,* 2004). Kumar and Pulliah (1998) reported ethno-medicinal uses of some plant species from the Mahbubnagar district of Telangana. The plants used for ethno-veterinary practices by Koyas of Pakhal Wildlife Sanctuary, Warangal district were documented by Murthy *et al*. (2007). The Indian Materia Medica alone includes about 2000 drugs of natural origin, almost all of which are derived from different traditional systems and folklore practices (Narayana *et al*., 1998). WHO mentioned that about 25% of modern medicines are developed from plants and used traditionall. India has about 27% of the total known medicinal plant species of the world as it represents one of the most important collection centres (Kumar and Katakam, 2000).

The documentation of indigenous plant knowledge gained momentum during colonial era, particularly among European Scholars. Notable contributions to ethnobotanical records include the work of Sir J.D. Hooker's work on Indian flora and Indian scholar E.K. Janaki Ammal, whose efforts payed way for modern ethnobotanical research during the latter half of the 20th century. This period marked a growing recognition of the need to preserve India's traditional plant knowledge, especially in the face of threats from industrialization and environmental degradation (Ruchita Shrivastava and Mukul Machhindra Barwant, 2024). Ethnobotany, the study of the relationships between people and plants, has emerged

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as a field that bridges culture, science, and the natural world. The use of plants is embedded in complex social-ecological system, illustrating how the relationship between humans and nature evolves over time and space (Albuquerque et al., 2017). Plants are used in a wide range of applications, from food and medicine to rituals and agriculture. One of the most significant contributions of ethnobotany is its role in traditional medicine. Many indigenous groups, such as the Bhils, Gonds, and Todas, possess an extensive knowledge of their local flora. This traditional knowledge, often unwritten and passed through orally, includes identification of edible plants, herbal remedies for various ailments, and the preparation of plant based agricultural aids. Ethnobotanical studies have identified hundreds of medicinal plants that are integral to India's traditional healthcare systems. Beyond medicine, this knowledge offers valuable insights into sustainable resource management practices. In the current context of changing climatic conditions due to global warming, understanding how indigenous communities manage and interact with their environment is crucial for addressing deforestation, soil degradation, and species extinction. Ethno-botanist apart from collection of plant, records the uses of plants uses with the help of informants (Jain, S.K. 1964). The primitive communities, who practice the traditional knowledge cure ailments are the custodians of it, such knowledge of tribe's has only oral traditions without any written documents.

METHODOLOGY

The study was conducted between January and July 2024, in two selected villages of Kumuram Bheem district, Telangana state of India. The villages were selected based on their accessibility, presence of traditional healers and knowledgeable community members. The study was based on interviews with traditional healers and community members and the identification of plants through field surveys. The interviews were conducted in the local language, and the responses were documented and recorded. Multiple field visits with men and women were selected. Field surveys were conducted to identify the plant species used for medicinal purposes in the community and the surrounding areas. The plants were identified based on their morphological characteristics with their local names. Voucher specimens of the identified plants were collected and deposited in the herbarium of the college. Through detailed questioning and information gathering of their traditional knowledge, based on the botanical knowledge of plants for which they use for different ailments plant specimens were collected and identified.

STUDY AREA

Kumuram Bheem Asifabad district is carved out of erstwhile Adilabad District of Telangana State with different tribal communities (Koyas, Kondareddis, Guthikoyas and Lambadis) inhabiting in and around dense forest patches. It is surrounded by Adilabad, Mancherial, Nirmal districts and the boarders of Maharashtra state. District comprises 15 mandalas and has two revenue divisions – Asifabad and Kaghaznagar. The district headquarter is located at Asifabad, a predominantly tribal town of Asifabad. It is named after Gond tribal leader Kumuram Bheem. It is the second most backward district in India, according to the 2018 NITI Aayog ranking. As of the 2011 Census, the district has a population of 515,812. Kumuram Bheem Asifabad district is the northern part of Telangana state. The forest cover in the district is more than 50% of the total geographical area of Telangana state which is predominantly dry deciduous followed by moist deciduous, riparian, scrub and grassland. The tribes present in the study area are Koyas, Kondareddis, Guthikoyas and Lambadi. Among these four tribal communities, Koya tribes are peculiar in attire, culture and living habits. Their folklore knowledge regarding the health concerns are different. There is no ethnic survey in particular to a specific tribe. The study is conducted through the regions of Esgaon and Chinthaguda and nearby tribal areas which provides folklore medicinal plant knowledge used by the local communities to treat common ailments.

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Telangana State map showing Kumuram Bheem district with Esgaon and Chinthaguda village location.

RESULTS

The present ethno-phytomedicinal study documented the traditional knowledge related to the use of medicinal plants by the indigenous and rural communities of Esgaon and Chinthaguda villages in Kumuram Bheem Asifabad District of Telangana state of India. Field surveys and interactions with local healers, elderly villagers, and knowledgeable informants revealed a rich repository of plant-based healthcare practices that continue to play an important role in primary health management.

A total of 49 medicinal plant species belonging to diverse genera and families were recorded and documented from the selected areas(Table 1). These plants were used for the treatment of various ailments such as gastrointestinal disorders, respiratory problems, skin diseases, fever, diabetes, wounds, inflammatory conditions, reproductive health issues, and snake/insect bites. The majority of the documented species were angiosperms, with herbs being the most dominant life form, followed by shrubs, trees, and climbers, indicating easy accessibility and frequent use by the local population. Different plant parts were utilized for medicinal preparations, among which leaves were most frequently used, followed by roots, bark, fruits, seeds, whole plant, and flowers. The preference for leaves may be attributed to their year-round availability and high concentration of bioactive compounds. Remedies were commonly prepared in the form of decoctions, pastes, powders, juices, and infusions, and were administered either orally or topically depending on the ailment. In several cases, single plant species were used, while some treatments involved poly-herbal formulations.

The study also revealed that traditional knowledge is primarily transmitted orally across generations, and is mostly preserved among elderly individuals and traditional healers. A comparative assessment of the two villages showed similarities in plant usage patterns, though certain species and therapeutic applications were unique to either Esgaon or Chinthaguda, reflecting local availability of flora and cultural preferences. Overall, the results highlight the significant ethno-phytomedicinal wealth of Esgaon and Chinthaguda villages and underscore the dependence of local communities on plant-based traditional medicine. The documented information provides a valuable baseline for phytochemical, pharmacological, and conservation-oriented studies, and emphasizes the urgent need to preserve this traditional knowledge before it erodes due to modernization and lifestyle changes (Figures 1 and 2).

CONCLUSION

The present report is a successful completion of the documentation and study on medicinal plants in a small selected area and this is the basic report from the Esgaun and Chinthaguda of Kumuam Bheem district of state of Telangana. There are plants that are traditionally employed for specific symptoms and conditions. The Ethno-botananical survey of the area

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revealed that the people of the area possess good knowledge of herbal plants and it's medicinal value as they are carrying this knowledge from generation to generation. Through such thorough and detailed ethno-medicinal study of tribal peoples and their knowledge a lot can be discovered and vast knowledge about plants and their medicinal uses can be uncovered. These studies and research can prove to help genrational knowldege not go in vain and can be passed to next generations. Ethno-botanical practices around some of tribal settlements around these selected areas upholds details of medicinal and various plant and animal knowldege, and their ways of using the plants in their traditions, cultures and life style still undiscovered.

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Table: Total 49 species (31 families) were collected and documented in the areas of Esgaun and Chinthaguda of Kumram Bheem Asifabad district of Telangana State.

S.No.	Scientific Name	Vernacular Name	Family	Part Used	Uses
1	*Sida rhombifolia*	Mahabala	Malvaceae	Leaves and flowers	Diarrhoea and malarial fevers
2	*Aegle marmelos*	Maredu	Rutaceae	Fruit, leaf, root and bark	Treating fever and nausea,
3	*Bambusa bambos*	Veduru	Poaceae	Stem joints and clumps	Anti-inflammatory and astringent
4	*Borassus flabellifer*	Thadi	Arecaceae	Roots and leaves	Diuretic and anti-parasitic
5	*Canthium coromandelicum*	Balusa	Rubiaceae	Leaves and roots	Diabetes, fevers,
6	*Capparis zeylanica*	Adonda	Capparaceae	Leaves	Swellings, boils and piles.
7	*Grewia hirsuta*	Jibilika	Malvaceace	Stem, leaves, fruits, and roots	Anaemia and cough
8	*Madhuca longifolia*	Ippa	Sapotaceae	Flower, fruits bark and leaves	Treatment for itching and swelling,
9	*Grewia fravescens*	Bankajana	Malvaceae	Whole plant	Anti –inflammatory and antimicrobial,
10	*Dispyros melanoxylon*	Tuniki	Ebenaceae	Bark and fruits	Skin and blood diseases.
11	*Acylypa indica*	Timmi chettu	Euphorbiaceae	Leaves, stem, flowers, roots and seeds	Pimples, psoriasis and eczema.
12	*Ailanthus excelsa*	Peddamanu	Simaroubaceae	Leaves and bark	Tonic used after labor.
13	*Dregea volubilis*	Bandigurja	Apocynaceae	Leaves & fruits	To boils and abscesses.
14	*Cassytha filformis*	Pashiteega	Lauraceae	Stem and leaves	Astringent and diuretic.
15	*Senna auriculata*	Tangedu	Fabaceae	Leaves and roots	Leprosy to ulcers
16	*Soymida febrifuga*	Somidi	Meliaceae	Bark	Vaginal infection and rheumatic pains
17	*Senna occidentalis*	Adavi chennagi	Fabaceae	Leaves , roots flower and seed	Treatment of fever, typhoid
18	*Ziziphus oenopolia*	Pariki	Rhamnaceae	Leaves and fruits	Antimicrobial, antidiabetic
19	*Acacia nilotica*	Nalla thumma	Mimosaceae	Roots	Roots are used against cancers and/or tumors
20	*Ficus religiosa*	Ravi chettu	Moroceae	Leaves bark seeds, and fruits	Asthma, diabetes and diarrhoea,

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21	*Bryophyllum pinnata*	Ranapala	Crassulaceae	Leaves	Eaten for diabetes and diuresis,
22	*Calotropis gigantea*	Jilledu	Apocynacae	Roots, bark, leaves and flowers	Treating skin, digestive track
23	*Aerva lanata*	Pinikura	Amaranthaceae	Whole plant	Cough and migraine
24	*Celosia argentea*	Gunugu	Amaranthaceae	Leaves and flowers	Blood-shot eyes and blurring of vision,
25	*Cissus quadrangularis*	Nalleru	Vitaceae	Roots and stem	Bone fractures, allergies and cancer,
26	*Achyranthes aspera*	Uttarani	Amaranthaceae	Seeds , roots, and shoots	Boils, asthma, in facilitating delivery
27	*Holarrhena pubescens*	Patakodise	Apocynaceae	Seed and bark	Jaundice and diarrhoea
28	*Terminalia bellirica*	Tani	Combretaceae	Fruits and bark gum	Cough, and sore throat
29	*Tephrosia purpurea*	Vempally	Fabaceae	Whole plant	Asthma, and tumours
30	*Tectona grandis*	Teak	Lamiaceae	Wood and leaves bark	Laxative and sedative
31	*Eucalyptus globulus*	Nilgiri	Myrtaceae	Leaves	Wounds, ulcers, burns.
32	*Ricinus communis*	Amudam	Euphorbiaceae	Leaves ,roots and seeds	Inflammation treatment and liver disorders.
33	*Prosopis cineraria*	Jammi	Fabaceae	Leaves and pods	Asthma, piles etc.
34	*Solanum nigrum*	Thakkai	Solanaceae	Fruits and roots	Antitumor genic, antioxidant,
35	*Senegalia catechu*	Kachu thumma	Fabaceae	Heartwood and bark	To treat throat and diarrhoea.
36	*Elephantopus mollis*	Kukka pogaku	Asteraceae	Leaves or whole plant	Diarrhoea and stomach disorders
37	*Tinospora cordifolia*	Thippa theega	Menispermaceae	Root , stems, and leaves	Treatment of fever, jaundice and chronic
38	*Buchanania lanzan*	Morri chettu	Anacardiaceae	Leaves , seeds, bark, and kernels	Remove spots and blemishes from the face
39	*Moringa oleifera*	Karu munaga	Moringaceae	Seeds, leaves, flowers and roots	Asthma, diabetes and breast-feeding.

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40	*Citrus limonum*	Adavi nimma	Rutaceae	Lemon juice, rind, and peel	To treat scurvy, deficiency vitamin C.
41	*Abrus precatorius*	Guriginja	Fabaceae	roots, leaves and seeds	Mouth ulcer.
42	*Argemone mexicana*	Balurakkayi	Papaveraceae	Whole plant	Tumours, warts and skin diseases.
43	*Ageratum conzyzoides*	Vishamushti	Asteraceae	Whole plant, leaves, and root	Anti-inflammatory and anticancer,
44	*Annona reticulta*	Ramaphalam	Annonaceae	Leaves and seeds	Anthelmintic and analgesic,
45	*Bauhinia variegata*	Aare chettu	Fabaceae	Leaves, pods, buds, flower and seeds	Bark tonic and anthelmintic,
46	*Catharanthus roseus*	Billa gannerup	Apocynaceae	Whole plant	Remedy for all sorts of Kapha disorder.
47	*Pongamia pinnata*	Kanuga	Fabaceae	Stem bark and leaves	Treatment of tumours and piles.
48	*Cissus quadrangularis*	Nalleda	Vitaceae	Roots and stem	Used for osteoarthritis and rheumatoid.
49	*Datura metel*	Ummettha	Solanaceae	Leaves and seeds	Treatment of asthma and cough.

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Figure 1: *Cassytha filiformis*; *Senna auriculata*; *Senna occidentalis*; *Ziziphus oenopolia*; *Acacia nilotica*; *Bryophyllum pinnata*; *Celosia argentea*; *Cissus quadrangularis* and *Holarrhena pubescens*

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Figure 2: *Canthium coromandelicum*; *Capparis zeylanica*; *Grewia hirsute*; *Madhuca longifolia*; *Grewia flavenscens*; *Dispyres melanoxylon*; *Acalypha indica*; *Alianthus excels and Dregea volubilus.*