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Ethno-botanical and folklore study of medicinal plants from Eturnagaram wildlife sanctuary, Telangana State, India

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Abstract

Ethno-botanical study deals with the documentation of the indigenous, traditional knowledge of plants used by the ethnic people since time immemorial. In the present Ethno botanical study (2016-2018) collected the data by conversation, structured questionnaire from various, traditional, tribal, koya, guthikoya, chenchu, kondareddlu, Lambadi and other indigenous group of people in Eturnagaram Wildlife sanctuary areas (Pasra, Thadvai, Medaram, Eturnagaram, Mangapeta etc.) of Telangana state. The majority of data was collected from tribal, local dwellers, herbal practitioners and traditional healers. The present study provided information about medicinal plants which are predominantly using in remedies by local peoples. The tribal people, herbal practitioners, traditional healers and rural peoples are helped to identify and collect medicinal plants data which are using in medicine. Present study provides data of indigenous, traditional knowledge of the study area and medicinal Plant wealth, which having a scope for screening of presently recorded plants for active compounds having specific curative effects on various diseases.

Keywords: Ethanobotany, herbal, indigenous, medicine, tribes, traditional

Introduction

Plants have been one of the important sources of medicines ever since the dawn of human civilization. Plants still remain as one of the major sources of drugs in modern as well as traditional system of medicine throughout the world. The use of medicinal plants played important role in Ayurveda, Unani, Siddha and also in modern medicine. The World Health Organization (WHO) estimated that 80% of the population of developing countries rely on traditional medicines, mostly plant based drugs, for their primary healthcare needs and security especially in Asia and African Countries., Even in modern pharmacopoeia still contains at least 25% drugs derived from plants and many others which are synthetic analogues built on prototype compounds isolated from plants. India and other countries have rich floristic yielding herbal drugs. The world market includes herbal drugs, pharmaceuticals, fragrances, flavors, dyes and other ingredients and their marketing exceeds several billion dollars per year. The collection of ethno-botanical knowledge is the main source for the discovery of drugs. Field study in a tribal area gives firsthand information the first step in ethno-botanical field work is to identify the local inhabitants or primitive societies and their regional jurisdiction. Ethano-botanist apart from collection of plant, also need to discuss and records the uses of plants with the help of informants (Jain, S.K. 1964) ^[3]. The primitive communities, who hold the traditional knowledge and practice the traditional way of treatment to cure ailments are the custodians of it, such knowledge of tribal's has only oral traditions without any written documents. This knowledge was even passed through generation to generation and play an important role in conservation and sustainable use of biodiversity. Unfortunately, Due to the changing life style of tribals and fast urbanization, globalization, modernization, availability of hospitals in remote areas the ethnobotanical knowledge on useful plants acquired and accumulated through generations is gradually getting lost. Hence there is an urgent need of recording all ethnobotanical information before they are lost and continuous efforts should be made to collect the information which will provide avenue for future generation.

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Study Area

Eturunagaram Wildlife Sanctuary is located at a distance of 110km from Warangal. It was declared as wildlife sanctuary in the year of 1953 by the former Hyderabad Government. It is also counted as those rare eco-regions around the globe that has various embryonic species of ephemeral elements. The natural park is spread over an area of 806 sq. kms in Warangal district. It is located near the Maharashtra, Chhattisgarh and Telangana border. The area in this wildlife park is full of steeps and gentle slopes. On the top of it, the wildlife sanctuary area has some historical significance owing to the existence of tree fossils in this Sarvai area and caves. Three-quarters of the area consist of a plain while the rest is hilly with many streams and springs. Godavari River passes through the sanctuary. The perennial river Dayyam Vagu flows through this beautiful sanctuary. This Vagu separates the wildlife sanctuary into two parts. It is a tropical dry deciduous with teak and other trees of good quality standing 60 ft (18 m) and above. The biennial festival of Sammakka Saralamma Jatara is held in the sanctuary. This region is covered completely with thick natural vegetation with rich Biodiversity. It is a rich forest coverage area, plant diversity

and the ethnic people also have more in reserve as traditional botanical knowledge (Pullaiah, T. 2015) [5].

Material and Methods

In the part of Ethanobotanical study Field trips were conducted and ethnomedicinal data were collected during the 2016-2018 through conversation, structured questionnaire from various, traditional healers, herbalists, tribal, koya, guthikoya, chenchu, kondareddlu, Lambadi, other indigenous group of people and elder people in the field trips of Pasra, Thadvai, Eturnagaram, Mangapeta tribal areas in and around Eturnagaram Wildlife Sanctuary of Telangana (Narender and Mustafa 2016, Reddy *et al* 2007 & 2016, Sreeramulu *et al.* 2016) [4, 7, 8]. During the conversation local names, useful plant parts, method of preparation and dosage were recorded (Hemadri *et al.* 1986) [2]. In the present account, 80 species belonging to 32 families are reported. They are used as ethnomedicines for various severe diseases. The tribal people, herbal practitioners, traditional healers and elder peoples are helped to identify and collect medicinal plants data which are using as ethnomedicine in the study area.



Fig. 2: Field Visits to Ethno-Botanical Study

Results

The present study was carried out on the Ethno botanical survey during 2016-2018, with the regular field visits by once in two weeks as a field visit in to document the traditional knowledge of local people on medicinal plants, and to investigate the distribution, abundance, diversity and biological activity of medicinal plants. We collected ethnomedicinal data through conversation, structured questionnaire administered with traditional healers, herbalists and elder people in the field visits in Eturnagaram Wildlife sanctuary spread over an area of 806 sq.kms, and perennial river Dayyam Vagu flows through this beautiful sanctuary with green flourish forest area. During the study local names,

useful plant parts, method of preparation and dosage of 96 plant species belonging to 42 families used for different types of diseases like diabetes, skin diseases, wound healing, sound-clearing agent, toothache, fever, stomach problems, eye infections and abortion. Some are used to treat dangerous diseases like gonorrhea, syphilis, tuberculosis, cancer etc. are recorded. They are using medicinal plants singly in their own preparation for the treatment of various ailments on the basis of indigenous knowledge passed on to them generation after generation on the advice of elders, wise men and religious teachers. The above traditional knowledge enlightening the scope for screening of presently recorded plants for active compounds having specific effects on various ailments.

Table-1: List of Medicinal Plants which are using by Local tribes of Etunagaram Wildlife Sanctuary, Telangana State.

S. No	Scientific name	Vernacular name/ Local Name	Family	Plant /Part used	Usages by Tribes in various remedies
	<i>Abrus precatorius</i> L.	Gurija	Fabaceae	Leaf	Insect bite
	<i>Abutilon indicum</i> (L.) Sweet	Thutturu benda	Malvaceae	Whole plant	Infertility
	<i>Acacia leucophloea</i> (Roxb.) Willd.	Tella tumma	Fabaceae	Stem bark	Wounds
	<i>Senegalia chundra</i> (Raxb. Ex. Roxb) Willd)	Sandra	Mimosaceae	Stem bark	Ulcer
	<i>Acacia nilotica</i> (Linn.) Willd. ex Del.	Nallathumma	Mimosaceae	Leaves, Decoction of bark	Diarrhoea, Wound healing, burns and scalds
	<i>Acalypha indica</i> L.	Muripinda, pippaku	Euphorbiaceae	Leaf	Scorpion bite, gas trouble
	<i>Achyranthes aspera</i> L.	Uttareni	Amaranthaceae	Root	Scorpion sting, tooth-ache
	<i>Adenantha pavonina</i> L.	Bandi guriginja	Fabaceae	Leaf	Dysentery, hemorrhage
	<i>Aegle marmelos</i> (L.) Corrêa	Maredu	Rutaceae	Fruit	Diarrhoea, skin disease, constipation
	<i>Alangium salviifolium</i> (L. f.) Wangerin	Udugu	Alangiaceae	Stem bark	Bone fracture
	<i>Albizia lebbek</i> (L.) Benth.	Dirisena	Fabaceae	Stem bark	Insect bite, knee pain, skin disease
	<i>Andrographis paniculata</i> (Burm.f.) Nees	Nelavemu	Acanthaceae	Leaf	Edema, viral fever, typhoid
	<i>Annona squamosa</i> L.	Seethaphalam	Annonaceae	Seed	Insect bite, lice in hair, tooth-ache
	<i>Anogeissus latifolia</i> (Roxb. ex DC.) Wall. ex Guillem. & Perr.	Tiruman	Combretaceae	Stem bark	Insect bite
	<i>Argemone mexicana</i> L.	Pichi kusuma	Papaveraceae	Leaf	Itching, sexually transmitted diseases
	<i>Aristolochia indica</i> L.	Nalleswari	Aristolochiaceae	Root	Snake bite, aphrodisiac
	<i>Arva lanata</i> L (L) Juss.	Pindikura	Amaranthaceae	Whole Plant	Break Kidney stones
	<i>Asclepias curassavica</i> L.	Jilledu mandara	Apocynaceae	Whole plant	Piles, gonorrhoea, tumors
	<i>Asparagus racemosus</i> Willd	Shatamuli	Asparagaceae	Tuber	Increase Breast Milk, Diarrhoea, Aphrodisiac,
	<i>Azadirachta indica</i> L.	Vepa	Meliaceae	Young leaf, Bark	Constipation, skin disease, leucoderma, hyperdispsia, leprosy, Chicken pox
	<i>Bambusa arundinacea</i> (Retz.) Willd.	Veduru	Bambusaceae	Root, Leaf	Leprosy, skin diseases, burning sensation, jaundice, tuberculosis, syphilis
	<i>Bauhinia purpurea</i> L.	Devakanchana	Caesalpinaceae	Root, Dried seed	Eradicate hair lice. Goiter
	<i>Bauhinia recemosa</i> Lamk	Aare	Caesalpinaceae	Leaf	Sticky Motion, Malaria
	<i>Barleria prionitis</i> L.	Mulla gorinta	Acanthaceae	Root	Fever, immune restorative
	<i>Benincasa hispida</i> (Thunb.) Cogn.	Boodida Gummadi	Cucurbitaceae	Fruit Juice, Seeds	Asthma, cough, diabetes, dry cough
	<i>Biophytum sensitivum</i> (Linn) D.C.	mukkuti	Oxalidaceae	Leaf Juice	Urinary stone, bilious fevers, snake bite, gonorrhea
	<i>Boerhavia diffusa</i> L.	Atikamamidi	Nyctaginaceae	Whole plant	Anaemia, night blindness
	<i>Bombax malabaricum</i> (DC.)Schott & Endlicher	Buruga	Bombacaceae	Bark, Root, Flower	Pulmonary tuberculosis, influenza, burning sensation dysentery
	<i>Borassus flabellifer</i> Linn	Tati	Araceae	Root, Fruit	hyperdipsia, burning sensation, intestinal worms
	<i>Boswellia serrata</i> Roxb.	Andugu	Burseraceae	Bark	Rheumatism, Knee Pain
	<i>Buchanania axillaris</i> (Desr.) Ramamoorthy	Pedda morli	Anacardiaceae	Flower	Wounds
	<i>Butea monosperma</i> (Lam.) Taub.	Moduga	Fabaceae	Stem bark	Menstrual pain, high bleeding
	<i>Calophyllum inophyllum</i> Linn.	Ponna	Clusiaceae	Bark, Leaves	Arthritis, migraine, Ophthalmitis, skin diseases, scabies
	<i>Calotropis gigantea</i> (L.) Dryand.	Jilledu	Apocynaceae	Stem bark	Knee pain
	<i>Carica papaya</i> Linn.	Boppai	Caricaceae	Fruit, Seeds, latex	Intestinal Worms, constipation, psoriasis, Skin Diseases
	<i>Capparis zeylanica</i> L.	Adonda	Capparaceae	Fruit	Ear ache, scorpion bite
	<i>Cardiospermum halicacabum</i> L.	Buddateega	Sapindaceae	Root	Arthritis
	<i>Cassia fistula</i>	Rala	Caesalpinaceae	Bark, Root	Whooping cough, Diarrhea
	<i>Celosia argentia</i>	Gunugu	Amaranthaceae	Leaf, Seed	Poisonous insect bite, Diarrhea
	<i>Centella asiatica</i> (L.) Urb.	Saraswati aku	Apiaceae	Whole plant	Memory
	<i>Cinnamomum verum</i> Presl.	Dalchina	Lauraceae	Bark	asthma, anorexia, inflammations, stomachalgia, nausea, vomiting
	<i>Cissus quadrangularis</i> L.	Nalleru	Vitaceae	Stem Bark	Bone fracture
	<i>Cissampelos pareira</i> L.	Boddi kura	Menispermaceae	Root	Digestion
	<i>Citrus aurantifolia</i> (Christm.) Swingle	narinja	Rutaceae	Fruit	Vomiting, cough, bronchitis, scabies
	<i>Cleistanthus collinus</i> (Roxb.) Benth. ex Hook. f.	Kodisha	Euphorbiaceae	Stem bark	Wounds
	<i>Cleome viscosa</i> L.	Kukka vaminta	Cleomaceae	Whole plant	Arthritis, Infantine convulsions
	<i>Cocos nucifera</i> Linn.	Kobbari	Arecaceae	Root, Fruit	Leprosy, helminthiasis, uterine disorders,
	<i>Croton tiglium</i> Linn.	Joypala	Euphorbiaceae	Seed Oil	Abdominal disorders, constipation,

					cough, catarrh, bronchitis dyspepsia,
	<i>Cocculus hirsutus</i> (L.) W.Theob.	Dusari teega	Menispermaceae	Root	Gonorrhoea, fertility
	<i>Curcuma longa</i> L.	Pasupu	Zingiberaceae	Rhizo me	Antiseptic
	<i>Cynodon dactylon</i> (L.) Pers.	Garika	Poaceae	Leaf	Kidney stone
	<i>Datura metel</i> L.	Ummetta	Solanaceae	Leaf	Scorpion bite
	<i>Delonix elata</i> (L.) Gamble	Chilukapari chettu	Fabaceae	Leaf	Bone fracture
	<i>Dichrostachys cinerea</i> (L.) Wight & Arn.	Velturu chettu	Fabaceae	Root	Rheumatism, urinary diseases
	<i>Dillenia pentagyna</i> Roxb.	Revadi	Dilleniaceae	Leaf	Constipation, stomach-ache
	<i>Dioscorea alata</i> L.	Bellam gadda	Dioscoreaceae	Tuber	Aphrodisiac
	<i>Dioscorea bulbifera</i> L.	Chenna gadda	Dioscoreaceae	Tuber	Dysentery
	<i>Dioscorea pentaphylla</i> L.	Govinda gadda	Dioscoreaceae	Tuber	Rheumatism
	<i>Dregea volubilis</i> (L.f.) Benth. ex Hook.f.	Bandi gurija	Apocynaceae	Leaf	Rheumatism
	<i>Euphorbia tirucalli</i> L.	Kaadajemudu	Euphorbiaceae	Whole plant	cold, cough
	<i>Gloriosa superba</i> L.	Potti dumpa	Colchicaceae	Tuber	Abortion
	<i>Gymnema sylvestri</i> (Retz.) R.Br. ex Sm.	Podapatri	Apocynaceae	Leaf	Diabetes
	<i>Hemidesmus indicus</i> (L.) R.Br. ex Schult.	Suganda pala	Apocynaceae	Leaf	Galactogogue
	<i>Holoptelea integrifolia</i> Planch.	Pedda nemali	Ulmaceae	Stem bark	Leprosy, dyspepsia
	<i>Hybanthus enneaspermus</i> (L.) F. Muell.	Nela kobbari	Violaceae	Whole plant	Urinary problem
	<i>Justicia adhatoda</i> L.	Addasaram	Acanthaceae	Leaf	Asthma, cough
	<i>Kigelia africana</i> (Lam.) Benth.	Enugu lavuda	Bignoniaceae	Stem bark	Leprosy, syphilis, rheumatism
	<i>Lawsonia inermis</i> L.	Gorinta	Lythraceae	Leaf	Reduce body heat
	<i>Leptadenia reticulata</i> (Retz.) Wight & Arn.	Mukku teega	Apocynaceae	Whole plant	Aphrodisiac
	<i>Litsea glutinosa</i> (Lour.) C.B.Rob.	Narra mamidi	Lauraceae	Stem bark	Bone fracture
	<i>Madhuca longifolia</i> var. <i>latifolia</i> (Roxb.) A. Chev.	Ippa	Sapotaceae	Flower	Galactogogue
	<i>Melia azedarach</i> Linn.	Turkavepa	Meliaceae	Bark, Leaves, Fruit	leprosy, skin diseases, leucoderma, wounds, burning sensation malarial fever
	<i>Michelia champaca</i> Linn.	Champaka	Magnoliaceae	Root, Bark, Fruit	leprosy wounds, purgative emmenagogue
	<i>Mimosa pudica</i> L.	Attipatti	Fabaceae	Whole plant	Fistula, hydrocele
	<i>Mimusops elengi</i> Linn.	Pogada	Sapotaceae		tooth brushes, diarrhoea and dysentery, brain tonic
	<i>Mucuna pruriens</i> (L.) DC.	Dulagondi	Fabaceae	Whole plant	Aphrodisiac, spermatorrhoea
	<i>Nyctanthes arbor-tristis</i> L.	Parijatham	Nyctanthaceae	Stem bark	Back-ache, scurvy, baldness
	<i>Ocimum basilicum</i> L.	Saidaku	Lamiaceae	Seed	Summer stroke (cooling agent)
	<i>Operculina turpethum</i> (L.) Silva Manso	Tella tagada	Convolvulaceae	Whole plant	Obesity, tuberculosis
	<i>Pergularia daemia</i> (Forssk.) Chiov.	Dustapu teega	Apocynaceae	Leaf	Wounds
	<i>Pueraria tuberosa</i> (Willd.) DC.	Nela gummadi	Fabaceae	Root	Rheumatism
	<i>Rauvolfia serpentina</i> (L.) Benth. ex Kurz	Sarpagandhi	Apocynaceae	Root	Snake bite
	<i>Senna auriculata</i> (L.) Roxb.	Tangedu	Fabaceae	Root	Blood purifier, urinary diseases
	<i>Senna occidentalis</i> (L.) Link	Adavi chennangi	Fabaceae	Leaf	Rheumatism
	<i>Smilax perfoliata</i> Lour.	Nageti dumpa	Smilacaceae	Tuber	Abortion
	<i>Solanum surattense</i> Burm.f.	Vakudu	Solanaceae	Whole plant	Dandruff, infections
	<i>Soyimida febrifuga</i> (Roxb.) A. Juss.	Somidi	Meliaceae	Stem bark	Stomach-ache
	<i>Spathodea campanulata</i> P. Beauv.	Patida	Bignoniaceae	Stem bark	Urine passage inflammation, kidney problem
	<i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn.	Tella maddi	Combretaceae	Stem bark	Wounds
	<i>Tridax procumbens</i> (L.) L.	Nallalam	Asteraceae	Leaf	Wounds, skin rashes
	<i>Tylophora indica</i> (Burm. f.) Merr.	Mekameyani aku	Menispermaceae	Leaf	Asthma
	<i>Vanda tessellate</i> (Roxb.) Hook. ex G.Don	Kodikalla chettu	Orchidaceae	Whole plant	Ephemeral fever
	<i>Vitex negundo</i> L.	Vavili	Lamiaceae	Leaf	Skin disease, body pains
	<i>Withania somnifera</i> (L.) Dunal	Domma dolu gadda	Solanaceae	Tuber	Paralysis
	<i>Xanthium strumarium</i> L.	Marulamathangi	Asteraceae	Plant extract, seed powder	Headache, Snakebite
	<i>Ziziphus oenopolia</i> (L.) Mill.	Pariki	Rhamnaceae	Leaf/ Fruits	Dysentery, stomach ache

Conclusion

The Ethno botanical survey 2016-2018 collected data with the

regular field visits by once in two weeks as a field visit in and around the Eturnagaram Wildlife Sanctuary of Telangana.

The Ethano-botanical information was collected by the regular field visits by once in two weeks as a field visit in and around the Eturnagaram Wildlife Sanctuary from local tribes, traditional healers, elder people, herbal practitioners will be provided information about 96 medicinal plants with ethno-botanical study to explore about ethno-medicinal plants using for curing various diseases with medicinal properties. There is a much need to explore traditional, indigenous knowledge to document and to conserve such areas to make available for future generation and to find out the active compounds which having the specific medicinal curative properties, which will be helpful to cure so many illnesses, to eradicate hazardous diseases from the world and to be healthy and wealthy globe.

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