



HEALING TREES USED BY THE LAMBADI TRIBES OF ETTUNAGARAM WILDLIFE SANCTUARY, TELANGANA STATE, INDIA

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ABSTRACT

The ethno medicinal trees used by the Lambadi Tribes of Ettunagaram Wildlife Sanctuary Telangana, southern India are documented in the survey for six months from March 2016 to August 2016. Nineteen species of Trees were found used by the tribal groups. The relevant information about the morphological useful parts and rural medicinal uses for the treatment of various diseases were gathered through the Frequent interviews among the target group Lambadi Tribes, herbal plant collectors and local vaidyars from in and around village of the study area.

Key words: Lambadi Tribes, Ethno Medicine, Trees, Wildlife sanctuary

Introduction

According to the World Health Organization (WHO, 1999) estimative suggests that many developed countries have a great proportion of the population making use of traditional practice of health, especially the use of the medicinal plants. Although the access to the modern medicine is available in these countries, the use of medicinal herbs has kept its popularity for historical

and cultural reasons. The WHO has also estimated that 80 percent of the population of developing countries relies on Traditional medicines, mostly plant drugs, for their primary health care needs. Also, modern pharmacopoeia still contains at least 25 percent drugs derived from plants and many others, which are synthetic analogues, built on prototype compounds isolated from plants. Demand for medicinal plant is increasing in both developing and developed countries due to growing recognition of natural products, being non-narcotic, having no side effects, easily available at affordable prices and sometime the only source of health care available to the poor. Medicinal plant sector has traditionally occupied an important position in the socio cultural, spiritual and medicinal arena of rural and tribal lives of India (Farnsworth and Soejarto, 1991).

Medicinal plants represent an important health and economic component of biodiversity and also conservation and sustainable use, according to Rhaman et al. (2004). Information on the traditional knowledge of medicinal plants and their uses would represent a vital role in the discovery of novel products from plants as chemotherapeutic agents (Almeida et al., 2001; Silva et al., 2003; Rocha et al., 2005; BarbosaFilho et al., 2006, 2007, 2008). The surrounding plants form an integral part of culture of these people and the information about plants is passed on from generation to generation (Agra et al., 2007a, b).

Regarding the survey of medicinal plants in South India, a few reports by Gold Jamila (1999), Annie (2002), Selvi et al. (2004), Selvi, (2004), Subha Nanthini (2007), Shakiela (2008) and Biju (2008) were available. But still there are so many pockets in south India could be surveyed for the search of new Traditional medicines. So the present study was undertaken for the survey of the healing trees used by the Lambadi Tribes of Etturagaram Wildlife sanctuary, Telangana State.

Materials and Methods

Geography of the Location

The Eturnagaram wildlife sanctuary is located in the Warangal District of Telangana State. (Map.1.)The location which the snake found lies between 17°29'16" and 18°36'20"N and 78°49'49" and 80°40'13"E. The division has a geographical area of 8,687.81 km² which is 67.6% of the total area of the district (12,847 km²). Elevation is between 266 and 518 m, with a general SE slope along which surplus waters drain into the river Godavari. The climate is tropical, generally dry with temperature ranging from 15°C to 45°C and annual rainfall of 1182 mm, received mainly through south-west monsoon. Soils are primarily black cotton, loamy, sandy, and red chalaka. The area under forest cover is 2,310 km², 27% of the total geographical area of the division. The forest canopy density categories are moderately dense forest (953 km²), open forest (1015 km²), scrub (91 km²), and non-forest (244 km²). The forest division has six ranges: Bhupalapally North, Eturnagaram, Tadvai, Pasra, Mulugu, and Warangal. The research area was in Tadvai and Eturnagaram ranges which include Eturnagaram Wildlife Sanctuary.

Plant collection and identification

This data is collected during the study period from March 2016 to August 2016. During this period, weekly collections were taken from flowering plants during early morning. Every time, fresh collected materials were exhibited to the taxonomic expert to get the taxonomic information about the plants. The photographs of selected plants were also taken during the field trips. The habitual data were recorded in the field note book. Polythene bags were used to keep the collected materials in fresh condition. Hand lens was used for recording the morphological characters. The collected plants were brought to the herbarium room for preservation and further identification.

The collected plants were identified correctly and confirmed by referring various flora like The flora of Nilgiri and Pulney Hill top by Fyson (1921), The flora of presidency of madras by Gamble and Fischer (1957). In addition to the above flora Joseph (1981), Nair and Sasthri (1987) Sasidharan (2004) and J W Prakash *et al* (2006) were referred.

Identified plants were verified and by the herbarium of TBG&RI, Palode, Thiruvananthapuram. The plant specimens and their medicinal uses, Habit, useful part, for which the particular plant is thoroughly verified with Kirthikar and Basu (1980).

The data gathered through interviews was verified with the available literature (Yoganarasimhan and Chelladurai, 2000; Parota, 2001; The relevant information about the local names, their morphological useful parts and rural medicinal uses for the treatment of various diseases were gathered from the villagers, herbal plant collectors and local vaidyars from in and around village of the study area.

Binomial : *Acacia nilotica* (Linn.) Willd.ex Del.
Family : **Mimosaceae**

Plant description : Medium sized thorny trees with black or brown fissured bark. Lvs. alternate, elliptic with spines. Fl. yellow in heads. Pods stipulate, glaucous, monoliform, constricted. **RJ & BPN 346.**

Rural medicinal use : Leaves are ground and used with curd is good for Diarrhoea. Leaves are dried and milled and are dusted in wounds is good for healing.

Traditional medicinal uses : Decoction of bark used as a gargle and of pods in urino – genital diseases. Paste of bark applied externally to treat swellings. Leaf paste is used to cure wounds. Pulp of tender leaves is used to control dysentery. Gum powder mixed with the white of an egg applied on burns and scalds.

Binomial : *Azadiracta indica* A. Juss.
Family : **Meliaceae**

Plant description : Large trees with spreading branches. Bark is grey in colour. Lvs. alternate, imparipinnate, leaflets opposite, lanceolate to ovate. Margins coarsely serrate. Fl. small. Scented, numerous, white in colour, arranged in

panicles. Fr. green, ovoid, oblong, turns yellow in colour in ripening and smooth
RJ & BPN 477.

Rural medicinal use : Leaves are used in making bed for chicken pox patients. Fresh tender twigs are used to clean teeth. Dried flowers are used in treating arthritis.

Traditional medicinal use : The bark is useful in hyperdispia, leprosy, skin diseases, leucoderma, pruritus, wounds, malarial fever, wounds, ulcers, tumour, vomiting, intestinal worms, inflammation and fatigue. The leaves are are useful in burning sensation, leprosy, skin diseases, ulcers, tuberculosis, malarial fever, chickenpox, etc. The flowers are useful in burning sensation, ophthalmopathy, colic, dyspepsia, intestinal worms and general debility. The seeds are useful in tumours, leprosy, skin diseases, odontalgia, intestinal worms tuberculosis and diabetes. The oil is skin diseases, syphilitic sores, ulcers, ring worm infection, scabies and leprosy.

Binomial : ***Bambusa arundinaceae (Retz.) Willd.***

Family : **Bambusaceae**

Plant description : A tall thorny bamboo upto 30 m with many stems tufted on stout root stock. Prominent nodes and internodes. St. sheath coriaceous, Orange-yellow, streaked, glabrous, base rounded, ciliate, stiff tip. Leaf sheath with a short bristly auricle. Short ligule. Sikelets glabrous. Yellow or yellowish green in very long panicles. Often occupying the whole stem. Fr. oblong grains beaked by the style base. Grooved on one side. **RJ & BPN 359**

Rural medicinal use : The grains are cooked and taken inside is good for intestinal worms.

Traditional medicinal use : The roots are useful in leprosy, skin diseases, burning sensation, discolouration, strangury, ring worm and general debility. The leaves are useful in ophthalmopathy, lumbago, gonorrhoea, wounds, skin diseases and fever. The sprouts are useful in urorrhoea, intestinal worms and general debility. The “bamboo manna” is the siliceous secretion found in the internodes of the stems of various species of bamboo. It occurs in fragments or masses and is translucent or transparent and of bluish white in colour. It is

useful in vomiting, diarrhoea, hyperdipsia, burning sensation, leprosy, jaundice, bronchitis, cough, asthma, tuberculosis, syphilis, fever and general debility.

Binomial : *Bauhinia purpurea* L.

Family : **Caesalpiaceae**

Plant description: It is a small deciduous tree. Lvs. long and broad, rounded, and bilobed at the base and apex. Fl. conspicuous, pink and fragrant, with five petals. Fr. a pod. **RJ & BPN 504**

Rural medicinal use : Dried seed paste mixed with coconut oil applied once before taking bath will eradicate hair lice.

Traditional medicinal use: Roots are used for making decoction to treat goiter.

Binomial : *Benincasa hispida* (Thunb.) Cogn.

Family : **Cucurbitaceae**

Plant description : A trailing gourd climbing by means of tendrils. Lvs. large. Hispid beneath. Fl. yellow, unisexual, male peduncle, female peduncle shorter. Fr. broadly cylindrical. Hairy throughout. **RJ & BPN 458**

Rural medicinal use : 10-15 ml fruit juice is taken is good for diabetes

Traditional medicinal use : The fruits are useful in asthma, cough, diabetes, haemoptysis, haemorrhages from internal organs, epilepsy and fever. The seeds are useful in dry cough, fever, urethrorrhea and syphilis.

Binomial : *Biophytum sensitivum* (Linn) D.C.

Family : **Oxalidaceae**

Plant description : A slender, erect, annual with a rosette of Lvs. on top of the stem. Lvs. abruptly pinnate, sensitive, leaflets opposite, 6-12 pairs, the terminal pair being the largest, oblong apiculate at the apex, glabrous, pale beneath, Fl. yellow, dimorphic, peduncles many, slender upto 10 cm long, Fr. ellipsed capsules, Sd. prominently rigid, transversely striate. **RJ & BPN 378.**

Rural medicinal use : Leaf juice is mixed with curd is taken in is good for diarrhoea.

Traditional medicinal use : The plant is useful in strangury, urinary calculi, hyperdipsia in bilious fevers, wounds, gonorrhoea, asthma, and snake bite.

Binomial : ***Bombax malabaricum* (DC.)Schott & Endlicher**

Family : **Bombaxaceae**

Plant description : A tall deciduous tree with a straight buttressed trunk and spreading branches, Lvs. Large, spreading, glabrous, digitate, leaflets lanceolate and entire. Fl. Red, numerous. Fr. Capsules dehiscent by leathery valves. Sd. Smooth. **RJ & BPN 447**

Rural medicinal use : The paste of bark with its mucilage is used in treating skin eruptions.

Traditional medicinal use : The roots are used in dysentery. The gum is useful in dysentery, haemoptysis of pulmonary tuberculosis, influenza, burning sensation and blood impurities. Bark is used for healing wounds. Leaves are good for skin eruptions. Flowers are good for skin problems. Young fruits are useful in inflammations.

Binomial : ***Borassus flabellifer* Linn**

Family : **Areaceae**

Plant description: A tall palm attaining a height of about 30 m. St. black. With a crown of leaves at the top. Lvs. Palmately, fan shaped petiole edges with hard horny spinescent serratures. Fl. Unisexual. Fr. Large, drupes. **RJ & BPN 369**

Rural medicinal use : Fruits are useful in burning sensation and constipation.

Traditional medicinal use : The roots are useful in hyperdipsia, burning sensation and inflammation. The juice of the leaf stalks is good for gastric problems and cough. The fruits are useful in hyperdipsia, burning sensation, constipation, intestinal worms, leprosy, skindiseases and general debility.

Binomial : ***Calophyllum inophyllum* Linn.**

Family : **Clusiaceae**

Plant description : A medium sized evergreen glabrous tree. Lvs. Simple. Fl. pure white, fragrant, in lax few-flowered racemes, Sd. ovoid. **RJ & BPN 422.**

Rural medicinal use : The bark is made into a decoction and it is used against diarrhoea. Seed oil is good for arthritis.

Traditional medicinal use : The bark is useful in wounds, strangury, skin diseases, pruritus, ophthalmitis, internal haemorrhages, orchitis and for improving the complexion. The leaves are useful in migraine, vertigo and ophthalmia. The seed oil is useful in vitiated condition of vista, gout, intramuscular pain in leprosy, gonorrhoea, skin diseases, scabies and strangury.

Binomial : *Carica papaya* Linn.

Family : **Caricaceae**

Plant description : A small, soft wooded, laticiferous tree with a straight cylindrical stem bearing characteristic leaf scars with a tuft of lvs. at the top. Lvs. deeply lobbed, palm like with long hollow petiole. Fl. Unisexual. Sd. Many, yellowish brown in colour. **RJ & BPN 406**

Rural medicinal use : The fruit is good in treating intestinal worms and constipation

Traditional medicinal use : The fruits are used in cough, bronchitis, intestinal worms, inflammations, ring worm infections, skin diseases, psoriasis and injuries of urinary tracts. The latex is useful in round worm infestation, fever and general debility.

Plant description : A moderate sized handsome deciduous tree. Lvs. Pinnately compound. Fl. Bright yellow in racemes. Fr. Cylindric-pods. Sd. Broadly ovate horizontally immersed in dark coloured sweetish pulp. **RJ & BPN 468**

Rural medicinal use : Fruits are used as purgative and flowers are made into paste is used in skin diseases.

Traditional medicinal use : The roots are useful in skin diseases, syphilis and burning sensation. The bark is useful in boils pustules, leprosy, ringworm,

colic, constipation, fever, diabetes and cardiopathy. The leaves are useful in skin diseases, leprosy, ulcers and intermittent fevers. The flowers are useful in skin diseases, burning sensation, dry cough and bronchitis. The fruits are purgative, anti inflammatory, ophthalmic, leprosy, skin diseases, rheumatism, burning sensation and general debility.

Binomial : *Celosia argentea*

Family : **Amaranthaceae**

Plant description : An erect, branching plant with oval or lance-shaped, strongly veined Lvs. Long. Hundreds of tiny Fl. packed in dense, brightly colored flower heads which usually stand above the foliage. **RJ & BPN 360.**

Rural medicinal use : Leaf juice are mixed with flour made from Marantha rhizome is boiled and given to treat diarrhoea.

Binomial : *Cinnamomum verum Presl.*

Family : **Lauraceae**

evergreen tree, Lvs. ovate or elliptic-ovate, shiny above. Fl. small in axillary or sub-terminal cymes or panicles. Fr. ovoid berry, dark purple in colour having persistent perianth. **RJ & BPN 412.**

Rural medicinal use : Cinnamon oil is useful in treating inflammations

Traditional medicinal use :The bark is useful in bronchitis, asthma, cephalalgia, odontalgia, cardiac diseases, diarrhoea, uropathy, nausea and vomiting, flatulence, fever, halitosis and restoring normal skin colour on the face. Cinnamon oil is useful in anorexia, inflammations, stomachalgia, vitiated conditions of odontalgia, vomiting and tubercular ulcers.

Binomial : *Citrus aurantifolia (Christm.)Swingle*

Family : **Rutaceae**

Plant description : A medium sized thorny tree with greenish white, glabrous young shoots and greyish brown bark; Lvs. foliolate, leaf-stalks broadly winged, the wing nearly as large as the blade, leaflet elliptic or ovate, acute or acuminate, obtuse; Fl. white, large, very fragrant; Fr. globose, bright yellow

when ripe, rind of Fr. very aromatic, pulp sour, bitter or austere; seeds many, yellow or cream coloured, smooth, slimy. **RJ & BPN 479**

Rural medicinal use : The fruits are used against vomiting.

Traditional medicinal use : The fruits are are useful in cough, bronchitis, dyspepsia, nausea, flatulence, colic, helminthiasis, scabies and anaemia.

Plant description : A perennial, much branched handsome tendril climber, Rt. sometimes tuberous; Lvs. deltoid or sub rotund, angled or lobed, bright green above and pale beneath, Fl. white, large, unisexual; Fr. berries with white streaks, bright scarlet red when ripe; Sd. ovoid, compressed, yellowish grey. **RJ & BPN 525**

Rural medicinal use : Fruits are good purgative.

Traditional medicinal use : The fruits and leaves and are useful in vitiated conditions of kapha and pitta, wounds, ulcers, inflammation, helminthiasis, dyspepsia, hepatopathy, jaundice, skin diseases, leprosy, fever, asthma, cough, diabetes, stomatitis and anaemia.

Binomial : *Cocos nucifera* Linn.

Family : **Areaceae**

Plant description : A straight unbranched stately palm with a cylindrical annulated stem bearing a crown of large Lvs. Lvs. pinnate. Infl. spadix with a hard oblong longitudinally splitting spathe enclosing many yellow or orange male Fl. and few female Fl. Fr. trigonously obovoid or subglobose green or yellowish fibrous drupes; Sd. one, oval or spherical with a hard endocarp and oily white endosperm and sweet milky or watery fluid in the large cavity. **RJ & BPN 341**

Rural medicinal use : Fungus associated in leaf petiole is good for wound healing. The oil is good for hair growth and is used as a base for many medicinal oil preparations.

Traditional medicinal use : The roots are useful in pharyngodynia, uterine disorders, blennorrhagia, bronchitis, hepatopathy, strangury and helminthiasis. The juice of the young spadix when fresh is useful in dyspepsia, diarrhoea, dysentery, diabetes, haemoptysis, strangury, leprosy and general debility. The shell is good for hyperdipsia, strangury and halitosis. The kernel is useful in bronchitis, vitiated condition of pitta, hyperdipsia, tumours, skin diseases, eruptive fevers, haemoptysis and general debility. The water is useful in hyperdipsia, exhaustion, dysentery and diarrhoea, dehydration, strangury, and general debility. The oil is good for cooling the head and is good for hair growth. It used before taking bath. Also the oil is used as a base for the preparation of many medicinal oils.

Binomial : *Croton tiglium* Linn.

Family : **Euphorbiaceae**

Plant properties : A small evergreen tree with smooth bark and young shoots sprinkled with stellate hairs; Lvs. oblong, acuminate, membranous, yellowish green, minutely toothed; Fl. small, unisexual, males on slender pedicels, females larger on short thick pedicels; Fr. ovoid capsules; Sd. smooth, testa black, enclosing reddish brown oily endosperm **RJ & BPN 524.**

Rural medicinal use : Oil is used in treating inflammations.

Traditional medicinal use : The seeds and oil are useful in abdominal disorders, constipation, dyspepsia, helminthiasis, inflammations, psychological disorders, insanity, convulsions, ophthalmia, cough, catarrh, bronchitis, fever, leucoderma, ascites, anasarca, urolithiasis and dropsy.

Binomial : *Melia azadirachta* Linn.

Family : **Meliaceae**

Plant description: Large trees with spreading branches. Bark is grey in colour. Lvs. alternate, imparipinnate, leaflets opposite, lanceolate to ovate. Margins coarsely serrate. Fl. small. Scented, numerous, white in colour, arranged in

panicles. Fr. Green, ovoid, oblong, turns yellow in colour in ripening and smooth **RJ & BPN 464**.

Rural medicinal use : Leaves are used in making bed for chicken pox patients. Fresh tender twigs are used to clean teeth. Dried flowers are used in treating arthritis.

Traditional medicinal use : The bark is useful in hyperdispia, leprosy, skin diseases, leucoderma, pruritus, wounds, malarial fever, wounds, ulcers, tumour, vomiting, intestinal worms, inflammation and fatigue. The leaves are useful in burning sensation, leprosy, skin diseases, ulcers, tuberculosis, malarial fever, chickenpox, etc. The flowers are useful in burning sensation, ophthalmopathy, colic, dyspepsia, intestinal worms and general debility. The seeds are useful in tumors, leprosy, skin diseases, odontalgia, intestinal worm tuberculosis and diabetes. The oil is skin diseases, syphilitic sores, ulcers, ring worm infection, scabies and leprosy.

Binomial : *Michelia champaca* Linn.

Family : **Magnoliaceae**

Plant properties: A tall handsome evergreen tree, Lvs. simple, alternate, lanceolate, subcoriaceous, entire, glabrous above; Fl. yellowish, very fragrant, solitary and axillary; Fr. ovoid or ellipsoid capsules, dark brown opening on the back by two valves, valves woody, covered with white warty excrescences, Sd. brown, rounded on the back with pink fleshy aril. **RJ & BPN 394**

Rural medicinal use : Fruits are applied externally to heal leprosy wounds.

Traditional medicinal use : The root and root bark are purgative and emmenagogue and are useful in the treatment of abscesses, inflammation, constipation, amenorrhoea and dysmenorrhoea. The stem bark is useful in chronic gastritis, fever, strangury, cough, bronchitis and cardiac debility. Flowers, flower buds and fruits are useful in dyspepsia, nausea, burning sensation, haemoptysis, pruritus, skin diseases, leprosy, wounds and ulcers,

anorexia, colic, flatulence, helminthiasis, vertigo, cephalalgia, ophthalmia, nephropathy, gout, cough, bronchitis, amenorrhoea, dysmenorrhoea, strangury and malarial fever.

Binomial : *Mimosops elengi* Linn.

Family : **Sapotaceae**

Plant properties: A large evergreen tree with dark grey fissured bark and dense spreading crown; Lvs. oblong, glabrous, leathery with wavy margins; Fl. white, fragrant, axillary, solitary or fascicled; Fr. Ovoid or ellipsoid berries, Sd. ovoid, compressed, greyish brown, shiny. **RJ & BPN 375.**

Rural medicinal use : Tender stems are used as tooth brushes.

Traditional medicinal use: The bark, flowers and fruits are used as a gargle for odontopathy, ulitis and ulemorrhagia. It is also useful in urethrorrhoea, cystorrhoea, diarrhoea and dysentery. Flowers are used for preparing a lotion for wounds and ulcers; powder of dried flowers is a brain tonic, and is useful as a snuff to relieve cephalalgia. Unripe fruit is used as a masticatory and will help to fix loose teeth. Seeds are used for preparing suppositories in cases of constipation especially in children.

Result and Discussion

It is evident that the area has good healing plants diversity. This is in correlation with Annie (2002). The traditional medical practitioners “Vaidyars” have good knowledge about phyto-medicine. They were well versed in various illness and they can diagnose the disease by observing symptoms of the patients.

One of the serious threats we face is the degradation of tradition knowledge on medicinal plants. This is observed in present study also like that in various other parts of the country (Jain 1988, Farooque and Saxena 1996, Silori and Rana, 2000). Popularity and accessibility of modern medical aids, transformation in life style to more urban and lack of knowledge among the common people are the reasons for this degradation.

Conclusion

The study area is rich in diversity of Healing plants. The traditional local vaidyans knows how to apply the plants. Such indigenous knowledge is relatively cheaper than modern systems of medicine, reliable and risk factors on side effects are comparatively less. However, modernization, lack of knowledge on those factors and accessibility to modern hospitals has led the common people to rely on English medicine and it became the largest industry all over Kerala. Even though the treatment rates in such hospitals are higher, people has to go to such places to satisfy their health needs. It is in such a condition, the study gives hope to common man. From the present study it is found that traditional knowledge and resources are there in a hand's reach. But the use of such resources is lesser. Most of the physical ailments have local curatives. This knowledge has been validated by other Indian medical systems also. Hence the use of such traditional knowledge, the spreading of that information, the application of those information and conservation of such resources should be done. For that awareness must be created among the children as well as grownups.

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