



SURVEY OF TREES IN ASARIPALLAM MEDICAL COLLEGE AND HOSPITAL CAMPUS, KANYAKUMARI DISTRICT, TAMIL NADU, SOUTHINDIA

Lekshmi .J. L.¹ Subhalaxmi. K.²

¹Assistant Professor, P.G. Department of Botany and Research Centre, S.T.Hindu College, Nagercoil, Kanniyakumari District, (Affiliated to ManonmaniamSundararnar University, Anishekapatti , Tirunelveli

²M.Sc, Department of Botany and Research Centre, S.T.Hindu College, Nagercoil, Kanniyakumari District, (Affiliated to ManonmaniamSundararnar University, Anishekapatti , Tirunelveli

Corresponding Author- Lekshmi. J. L

Email- sreejai021@gmail.com

DOI- 10.5281/zenodo.6988346

Abstract

Forest provide a wide range of economic and social benefits such as employment, forest products and protection of sites of cultural value to mankind. A number of investigators have devoted their attention to the vast knowledge of plant properties still intact in native culture in different part of the world Plants perform a vital role in the lives of rural people particularly in developing countries where plants are used for house construction, fuel, agricultural implements, food, fodder, crude drugs, religious ceremony and ornamentation. The identification of trees and communication of indigenous trees is often a problem, professional taxonomists deal with the scientific names of plants, foresters mostly need to know a more narrow range of plants, whereas the local population often have considerable knowledge on both the identification and uses of plants.

Keywords : *Forest products, Indigenous trees, Native culture, Crude drugs, Narrow range plants.*

Introduction

The importance of leaving tree species of good phenotypic quality during forest clearance for timber and farming, particularly during regeneration sampling has revealed low levels of established seedlings and advanced growth of desirable species is a further instance of close coincidence of interest between the objectives of production of those of genetic resource conservation (Kemp, Namkoong and Wadsworth, 1993). Several medicinal trees and their products are still in home remedies and they represent a substantial proportions of the global drug- market. Life on the earth is fundamentally dependent on green vegetation and all aspects of life are touched by trees. Some species under such continues pressure are likely to become extinct in the near future Khan *et al.* (2013).The majority of rural dwellers depend on non – timber forest

products for survival both in terms of economy and health care delivery. Even today, there is mass shift from conventional (orthodox) health care to traditional phytotherapy health care system or ethnobotanical therapy to cure many diseases (Falodun, 2010).

Almost 80% of rural populations are dependent on medicinal trees for their primary health care (Dixie, 2003). Throughout the ages, humans have relied on nature for their basic needs, for the production of food, shelter, clothing, transportation, fertilizers, flavours and fragrances, and medicines (Cragg and Newman, 2005). Hence, extreme scarcity is experienced case of tree species of medicinal trees with the result of market materials are often admixed with adulterants. In order to eliminate the use of adulterated one hand to improve the supply of the coming years large scale

planting of these trees will have to taken up and hence standardization of their agro-techniques is of high relevance.

Methodology

Study Area :

The field work was undertaken in Asaripallam Government Medical College and Hospital Campus, Agastheeswaram Taluk, Kanyakumari district, Tamil Nadu. The district lies between 77° 15' and 77°36' of the east longitude and 8° 03' and north 8° 35' latitude. It was earlier known as Government T.B Hospital. The Study area under survey is located 46 meters above the sea level with the humidity level of 77%. The district receives a fairly good rainfall from both Southest and Northest monsoons. It has a population of 16,822 of which 8,257 are males while 8,565 are females. Most of the people are government employees, few of them are doing own business and feq depend on agriculture.

Documentation :

A Green Care Organization was also started in 2005 to protect the flora and fauna of the campus. Data's collected based on literatures. The information of the uses of trees was identified with the help of some literatures.

Result And Discussions

The present study reveals the trees of the study area were represented by 80 species belonging to 35 families. The Botanical name, family and the common name of the trees were represented. Among the medicinal trees (80), the family Fabaceae is the dominant one (13 species), followed by Moraceae (7species), Arecaceae(6species), Ficus tree species is the dominant one during the field visit. This study was aimed to identify the medicinal trees and its importance. The dominant tree species recorded are mostly belonging to the families Fabaceae, Moraceae, Arecaceae etc.,

The study revealed that the tree parts like roots, stem, leaves, fruits, flowers, bud, rhizomes are used by the local people for their primary health needs. Among the total identified trees, *Artocarpus heterophyllus*, *Annona squamosa* *Averrhoa bilimbi*, *Phyllanthus acidus*, *Citrus medica*, *Annona muricata*,

Mangifera indica, *Musa paradisiacal*, *Manilkara zapota*, *Psidium gujava*, *Phyllanthus emblico*, *Averrhoa carambola*, *Punica granatum*, *Carico papaya*, *Anacardium Occidentale* are considered as fruit yielding trees. *Azadiracta indica*, *Aegle marmelous* trees used for medicinal purposes. Among the identified medicinal trees (80) there are 4 *Ficus* species reported (*Ficus benghalensis*, *Ficus macrophylla*, *Ficus religiosa*, *Ficus racemosa*). *Alstonia scholaris* and *Cascabela thevetia* bark is used as a medicinally useful part. *Borassus flabellifer*, *Cocus nucifera* and *Bambusa vulgaris* trees used for agricultural and scaffolding purposes in Industries, *Plumeria alba* and *Plumeria rubra* trees used for medicinal and garnishing purposes. *Caesalpinia pulcherrima* and *Caesalpinia pluviosa* trees used for treating fever purposes. *Bogainvillea spectabilis*, *Azadiracta indica*, *Citrus medica*, *Magnolia champaca*, *Peltophorum pterocarpum*, has many phytochemical properties.

This study, aimed at inventorying, documenting and understanding traditional uses of indigenous tree species in selected areas. The secrecy of traditional medical practice is also a common phenonmenon Sharma *et al.*(2003) India. External applications and internal consumption are involved in the treatment of wounds, snake bite, head ache and skin diseases.

Some trees are used for various treatments like healing wounds, throat infections, itching, skin diseases, head ache, stomach ulcer, tumour in general are also documented Karthik *et al.*(2016), Indicating an overlap of ethnoknowledge, which occurs in various ethnic groups of people across the ecological ranges of tree species. It is believed that a medicine prepared by using multiple tree parts and other products like milk and honey contains a range of pharmacologically active compounds and it has more healing power than that of single tree products (Teklehaymanot and Giday 2007). Many wild tree species like *Caryota urens* L. are conserved in home gardens because of their high commercial values. Tree parts-

barks, leaves, flowers, fruits, seeds, and roots are used by indigenous or rural communities, traditional healers for remedies of diseases like fever, vomiting, piles, diarrhoea, carminatives, cough, astringent, laxative, malaria etc. The

secrecy of traditional medical practice is also a common phenomenon found in other part of Haryana Upadhyay *et al.*(2007) and worldwide.

Table-1 Botanical Names, Families And Common Names Of Trees In The Study Area

S.No	Botanical Name	Family	Common Name
1	<i>Aegle marmelous</i> L.	Rutaceae	Indian bael
2	<i>Abrus precatorius</i> L.	Moraceae	Rosary pea
3	<i>Acacia auriculiformis</i> A.	Fabaceae	Golden shower tree
4	<i>Albezia lebeik</i> L.	Fabaceae	Womens tongue
5	<i>Alstonia scholaris</i> (L.)	Apocynaceae	Blackboard tree
6	<i>Anacardium occidentale</i> L.	Anacardiaceae	Cashew
7	<i>Annona muricata</i> L.	Annonaceae	Custard apple
8	<i>Annona squamosa</i> L.	Annonaceae	Sugar apple
9	<i>Araucaria heterophylla</i> Hook.	Arecaceae	Norfolk Island Pine
10	<i>Artocarpus heterophyllus</i> L.	Moraceae	Jack fruit
11	<i>Artocarpus hirsutus</i> Lam.	Moraceae	Aini
12	<i>Averrhoa bilimbi</i> L.	Oxalidaceae	Star fruit
13	<i>Averrhoa carambola</i> L.	Oxalidaceae	Star fruit
14	<i>Azadiracta indica</i> A.Juss	Meliaceae	Neem
15	<i>Bambusa vulgaris</i> Var.	Poaceae	Common bamboo
16	<i>Bauhinia purpurea</i> L.	Fabaceae	Orchid tree
17	<i>Borassus flabellifer</i> L.	Arecaceae	Palmyra palm
18	<i>Bougainvillea spectabilis</i> Willd.	Nyctaginaceae	Paper flower
19	<i>Caesalpinia pluviosa</i> L.	Fabaceae	Paradise flower
20	<i>Caesalpinia pulcherrima</i> L.	Fabaceae	Peacock flower
21	<i>Callistemon citrinus</i> (Sheels).	Myrtaceae	Bottlebrush
22	<i>Carica papaya</i> L.	Caricaceae	Papaya
23	<i>Caryota urens</i> L.	Arecaceae	Royal palm
24	<i>Cascabella thevetia</i> L.	Apocynaceae	Yellow oleander
25	<i>Cassia fistula</i> L.	Fabaceae	Golden shower tree
26	<i>Casuarina equisetifolia</i> L.	Casuarinaceae	Australian pine tree
27	<i>Chamaedorea tepejilote</i> Liebm.	Arecaceae	Pacaya palm
28	<i>Citrus maxima</i> L.	Rutaceae	Pomilo
29	<i>Citrus medica</i> L.	Rutaceae	Bitter orange
30	<i>Cnidoscolus acontifolius</i> (Mill.)	Euphorbiaceae	Spinach tree
31	<i>Cocus nucifera</i> L.	Arecaceae	Coconut palm
32	<i>Cordia sebestena</i> L.	Boraginaceae	Geiger tree
33	<i>Croton malbaricus</i> L.	Euphorbiaceae	Croton
34	<i>Cupressus sempervirens</i> L.	Cupressaceae	Italian cypress
35	<i>Delonix regia</i> Hook.	Caesalpinioideae	Flame tree
36	<i>Dracaena fragrans</i> L.	Liliaceae	Corn plant
37	<i>Duranta erecta</i> L.	Verbenaceae	Sky flower
38	<i>Eriobotrya japonica</i> (Thunb).	Rosaceae	Japanese plum

S.No	Botanical Name	Family	Common Name
39	<i>Ficus benghalensis</i> L.	Moraceae	Indian banyan
40	<i>Ficus macrophylla</i> L.	Moraceae	Australian banyan
41	<i>Ficus racemosa</i> L.	Moraceae	Cluster fig
42	<i>Ficus religiosa</i> L.	Moraceae	Sacred fig
43	<i>Gliricidia sepium</i> (Jacq).	Fabaceae	Quickstick
44	<i>Hibiscus rosa sinensis</i> L.	Malvaceae	Hibiscus
45	<i>Jacaranda mimosifolia</i> D.Don	Bignoniaceae	Blue jacaranda
46	<i>Lawsonia inermis</i> L.	Myrtaceae	Henna
47	<i>Magnolia champaca</i> (L).	Magnoliaceae	Orange champaca
48	<i>Mangifera indica</i> L.	Anacardiaceae	Mango tree
49	<i>Manilkara zapota</i> L.	Sapotaceae	Sapota
50	<i>Millingtonea hortensis</i> L.	Bignoniaceae	Tree jasmine
51	<i>Morinda citrifolia</i> L.	Rutaceae	Noni
52	<i>Moringa oleifera</i> Lam.	Moringaceae	Drumstick tree
53	<i>Murraya koenigii</i> L.	Rutaceae	Curry leaves
54	<i>Musa paradisiacal</i> L.	Musaceae	Banana
55	<i>Nephelium lappaceum</i> L.	Sapindaceae	Rambuttan
56	<i>Peltophorum pterocarpum</i> (DC).	Fabaceae	Copper pod tree
57	<i>Periploca gracea</i> L.	Apocynaceae	Silk vine
58	<i>Phyllanthus acidus</i> L.	Phyllanthaceae	Star berry
59	<i>Phyllanthus emblica</i>	Phyllanthaceae	Indian gooseberry
60	<i>Phytolacca dioica</i> L.	Phytolaccaceae	Poke berry tree
61	<i>Plumeria alba</i> L.	Apocynaceae	White frangipani
62	<i>Plumeria rubra</i> L.	Apocynaceae	Red jasmine
63	<i>Polyalthia longifolia</i> L.	Annonaceae	False Ashoka
64	<i>Pongamia pinnata</i> (L).	Fabaceae	Pongam tree
65	<i>Psidium guajava</i> L.	Myrtaceae	Common guava
66	<i>Punica granatum</i> L.	Lythraceae	Pomegranate
67	<i>Roystonea regia</i> (Kunth)	Arecaceae	Royal palm
68	<i>Salix cinerea</i> L.	Salicaceae	Indian willow
69	<i>Santalum album</i> L.	Santalaceae	Sandal wood
70	<i>Senna auriculata</i> (L).	Fabaceae	Tanners cassia
71	<i>Senna siamea</i> L.	Fabaceae	Siamese cassia
72	<i>Spathodea campanulata</i> Beauv.	Bignoniaceae	African tuliptree
73	<i>Syziium samarangense</i> (BI).	Myrtaceae	Java apple
74	<i>Syzygium cumini</i> (L).	Myrtaceae	Java plum
75	<i>Tabernaemontana</i> <i>divaricata</i> L.	Apocynaceae	Pinwheel flower
76	<i>Tamarindus indica</i> L.	Fabaceae	Tamarind
77	<i>Tecoma stans</i> L.	Bignoniaceae	Golden trumpet
78	<i>Tectona grandis</i> L.	Lamiaceae	Teak
79	<i>Terminalia catapa</i> L.	Combretaceae	Indian almond
80	<i>Theobroma cacao</i> L.	Malvaceae	Cocoa beans

References :

1. Cragg and Newman. (2005). The Potential of African Medicinal Plants as a Source of Drugs. Current Organic Chemistry. 4: 973=1010.
2. Dixie, G., Imam, S.A. and Hussain, M.J. 2003. Medicinal Plants Marketing in Bangladesh. Inter-Cooperation, Dhaka, Bangladesh. 8 – 38.

3. **Falodun,A.(2010).**Herbal Medicine in Africa Distribution, Standardization and Prospects. *Research Journal of Phytochemistry* 4: 154-161.
4. **Karthik S, Subramanian M, Ravikumar S and Dhamodharan R (2016).** Ethnobotanical study of selected sacred grooves in Cuddalore and Villupuram District, Tamil Nadu, India. *Int. J. Curr. Res. Biosci. plant Biol.*; 3(1):92-103.
5. **Kemp, R.H., Namkoong, G. and Wadsworth, F. (1993):** Conservation of Genetic Resources in Tropical Forest management; principles and concepts. FAO, Rome.
6. **Khan, S.M., Page, S.E., Ahmad, H. and Harper, D.M. (2013).** Sustainable utilization and conservation of plant biodiversity in montane ecosystems: the western Himalayas as a case study. *Annals of Botany* 112: 479– 501.
7. **Teklehaymanot T and Giday, M. (2007).** Ethnobotanical study of medicinal plants used by people in Zegie Peninsula, Northwestern Ethiopia. *J Ethnobiol Ethnomed* 3:12. DOI: 10.1186/1746-4269-3-12.
8. **Upadhy V., Hegde H.V., Mesta D., Belchad S., Hampannavar V. and Kholkute S.D. (2010).** Digital database on ethno-medicinal plants of Western Ghats. *Cur. Sci.*, 99(12): 1658-1659.