

STUDIES ON PHYTOTHERAPEUTIC PLANTS OF THOVALAITALUK, KANYAKUMARI DISTRICT, TAMIL NADU, INDIA

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Abstract : Kanyakumari District, once known as the “granary of the south”, lies at the south western part of the Indian Peninsula. This district consists of four taluks – Agasteeswaram, Kalkulam, Thovalai and Vilavancode. Thovalai Taluk is the third largest taluk in this district with an area of 396.1 sq.k.m. (36.907 ha.). The people of this taluk traditionally are co-existing with their native environment and depend on plants and plant products for health and treatment of diseases. Studies were conducted with a view to identify the common plants of phytotherapeutic value naturally growing in this taluk. Plants were collected, identified and data regarding their utilization by local people and traditional medicine practitioners were recorded. However, in this paper 120 wild species were enlisted along with their therapeutic potential.

Keywords: Thovalai Taluk, Phytotherapeutic plants, Traditional medicine

INTRODUCTION

The value of medicinal Plants to the mankind is very well proven. It is estimated that 70 to 80 % of the people world-wide rely chiefly on traditional health care system and largely on herbal medicines (Shanley and Luz, 2003). People utilize local herbs for different ailments after centuries of trials. This expertise if documented properly would help the modern man to find more effective therapeutic use of these plants. Hence, research works carried out on documentation of plants utilized in regional

traditional medicines is the need of the hour. With this backdrop, an effort was made towards documentation and standardization of the plant materials used as medicine in Thovalaitaluk.

MATERIAL AND METHOD

Study Area – Thovalai Taluk. Thovalai Taluk is bounded on the north by the western ghats, on the east by Tirunelveli District, on the South by Agasteeswaram Taluk and in the west by Vilavancode and Kalkulam Taluks. (fig.1)

Fig.1. Kanyakumari District map showing Study Area



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Table 1. Phytotherapeutic species identified from Thovalai Taluk.

S.NO	Botanical name	Family	Tamil Name	Parts Used	Mode of Preparation	Mode of Applications	Ailments/Diseases Treated
1	Abelmoschusmoschatus Medic.	Malvaceae	Kasturivendai	Seeds	Infusion	Internal	Checks vomiting
2	Abelmoschusesculentus L.	Malvaceae	Vendai	Fruit	Decoction	Internal	Pneumonia
3	Abrusprecatorius L.	Fabaceae	Gundu-Mani	Seed	Juice	External	Chronic conjunctivitis
4	Abutilon indicum L.	Malvaceae	Vellarei	Leaves	Decoction	Internal	Diarrhoea
5	Acacia nilotica L.	Mimosaceae	Karuwelam	Leaves	Paste	External	Wounds
6	Acalyphaindica L.	Euphorbiaceae	Kuppaimeni	Leaves	Extract	External	Skin diseases
7	Achyranthesaspera L.	Amaranthaceae	Nayurivi	Leaves	Decoction	Internal	Indigestion
8	Achrassapota L.	Sapotaceae	Sapota	Fruit	Raw	Internal	Dysentery
9	Acoruscalamus L.	Acoraceae	Vasambu	Rhizome	Decoction	Internal	Dysentery
10	Agave Americana L.	Agavaceae	Aanaikathaalai	Leaves	Powder	Internal	Kidney diseases
11	AlbizialebbekBenth.	Mimosaceae	Kalindivagei	Bark	Decoction	Internal	Diarrhoea
12	Allamandacathartica L.	Apocynaceae	Golden trumpet	Leaves	Infusion	Internal	Acute abdominal pain
13	Allium cepa L.	Liliaceae	vengayam	Bulb	Raw	Internal	Purifies the blood
14	Aloe vera Mill.	Liliaceae	Sothukuttilai	Leaves	Extract	External	Falling hair
15	Amaranthusgangeticus L.	Amaranthaceae	Mullikkeerai	Root	Decoction	Internal	Promoting the flow of milk in nursing mothers
16	Anacardiumoccidentale L.	Anacardiaceae	Cashew	Bark	Decoction	Internal	Mouth ulcers
17	Ananascomosus Mill.	Bromeliaceae	Ananassappalam	Fruit	Raw	Internal	Kill intestinal parasites
18	Andrographispaniculata wall.	Acanthaceae	Nelavemu	Leaves	Decoction	Internal	Fever
19	Annonamuricata L.	Annonaceae	Mulluchitta	Fruit	Raw	Internal	High blood Pressure

20	Annonasquamosa L.	Annonaceae	Seetha	Fruit	Raw	Internal	Anaemia
21	Areca catechu L.	Arecaceae	pakka	Nut	Powder	Internal	expel tape worms from the body
22	Arachishypogaea L.	Leguminosae	Verkadalai	Nut	Raw	Internal	Tuberculosis
23	Argemonemexicana L.	Papaveraceae	Kudiyeotti	Seeds	Infusion	Internal	Asthma
24	Artocarpuscommunis J.R.	Moraceae	Seemepalakkal	Leaves	Decoction	External	Rheumatism
25	Artocarpusheterophyllus Lam.	Moraceae	Pilapalam	Latex	poultice	External	Insect bites
26	ArgyreianervasaBurm.	Convolvulaceae	Ambagar	Leaves	poultice	External	Skin diseases
27	Aristolochiaiindica L.	Aristolochiaceae	Adagam	Root	Decoction	Internal	Promotes menstrual flow
28	Asclepiascurassavica L.	Asclepiadaceae	Ipecacuemha	Root	Juice	Internal	Food poisoning
29	Asparagus officinalis L.	Asparagaceae	Kilavari	Root	Decoction	Internal	Secretion of milk in loctating mothers
30	Asteracanthalongifolia Ness.	Acanthaceae	Neremulli	Leaves	Decoction	External	Rheumatism
31	Averrhoabilimbi L.	Oxalidaceae	Kochittamarattai	Fruit	Raw	Internal	Lower the body heat
32	AzadirachtaindicaA.Juss.	Meliaceae	Vembu	Fruit	Raw	Internal	Piles
33	Basella alba L.	Basellaceae	Vasalakkirai	Leaves	Cooked	Internal	Promote the flow of wine
34	Bacopamonniieri L.	Scrophulariaceae	Nirpirami	Leaves	Decoction	Internal	Fever
35	Bixaorellana L.	Bixaceae	Amudadaram	Seeds	Infusion	Internal	Remove mucous secretions
36	Boerhaaviadiffusa L.	Nyctaginaceae	Mukkurattai	Root	Paste	External	Joint pain
37	Borassusflabellifer L.	Arecaceae	Panai	Leaves	Extract	Internal	Gastric ailments
38	Brassica juncea L.	Brassicaceae	Kadugu	Seed	Paste	External	Head.ache
39	Bryophyllumpinnatum Lam.	Crassulaceae	Malaikalli	Leaves	poultice	External	Insect bites
40	Calotropisgigantea R.Br.	Asclepiadaceae	Erikku	Root	poultice	External	Skin diseases
41	Caesalpiniasappan L.	Leguminosae	Padangam	Bark	Decoction	Internal	Diarrhoea
42	Cassia alata L.	Leguminosae	Anjali	Leaves	Infusion	Internal	Cough
43	Cassia auriculata L.	Leguminosae	Aavarai	Dry roots	Decoction	Internal	Diabetes
44	Capsicum frutescens L.	Solanaceae	Mullagay	Leaves	Decoction	Internal	Toothache
45	Cardiospermumhalicacabum L.	Sapindaceae	Mudukottam	Stem	Infusion	Internal	Diarrhoea

46	<i>Carica papaya</i> L.	Caricaceae	Pappali	Fruit	Raw	Internal	Jaundice
47	<i>Cassia fistula</i> L.	Caesalpiniaceae	Konnei	Leaves	Extract	External	Rheumatic pain
48	<i>Cassia tora</i> L.	Caesalpiniaceae	Tagarai	Leaves	poultice	External	Skin diseases
49	<i>Catharanthus roseus</i> G.Bom.	Apocynaceae	Sudukadumallikai	Leaves	Decoction	Internal	Diabetes
50	<i>Caesalpinia pulcherrima</i> L.	Caesalpiniaceae	Mayikonnai	Flowers	Infusion	Internal	Malarial fever
51	<i>Centella asiatica</i> L.	Umbelliferae	Vallarie	Leaves	Powder	Internal	Tuberculosis
52	<i>Chrysanthemum indicum</i> L.	Asteraceae	Akkarakkaram	Flower	Infusion	Internal	Painful menstrual flow
53	<i>Cissus quadrangularis</i> L.	Vitaceae	Pirandai	Stem	Decoction	Internal	Diarrhoea
54	<i>Citrus medica</i> L.	Rutaceae	Kadaranarathai	Fruit	Juice	Internal	Abdominal pain
55	<i>Citrus limon</i> L.	Rutaceae	Yelumichai	Fruit	Juice	Internal	Piles
56	<i>Cleome viscosa</i> L.	Capparidaceae	Nayikkadugu	Leaves	poultice	External	Skin ailments
57	<i>Clitoria ternatea</i> L.	Papilionaceae	Kakkanam	Seed	Roasted Powder	Internal	Stomach pain
58	<i>Coccinia indica</i> Wt & Arn.	Cucurbitaceae	Kovai	Fruit	Raw	Internal	Diabetes
59	<i>Cocos nucifera</i> L.	Palmae	Tengay	Flower	Infusion	Internal	Respiratory Problems
60	<i>Coleus aromaticus</i> Benth.	Lamiaceae	Kurpuravalli	Leaves	poultice	External	Head.ache
61	<i>Colocasia esculenta</i> L.	Araceae	Seppankizhangu	Corm	Juice	External	Hair loss
62	<i>Coriandrum sativum</i> L.	Umbelliferae	Kothamalli	Leaves	Poultice	External	Joint pain
63	<i>Cucumis sativus</i> L.	Cucurbitaceae	Vellarikai	Fruit	Raw	Internal	Heart problems
64	<i>Cucurbita maxima</i> Duchesne.	Cucurbitaceae	Pusanikkay	Seed	Raw	Internal	Digestion
65	<i>Cupressus sempervirens</i> L.	Cupressaceae	Suram	Fruit	Decoction	Internal	Hernia
66	<i>Cuscuta reflexa</i> Roxb.	Convolvulaceae	Kodiyagundal	Whole plant	Decoction	Internal	Jaundice
67	<i>Cymbopogon citratus</i> Stapf.	Gramineae	Vasanappillu	Leaves	Extract	Internal	Sleepless ness
68	<i>Cynodon dactylon</i> Pers.	Gramineae	Arugam-pullu	Whole plant	Juice	External	Rheumatism
69	<i>Datura innoxia</i> Mill.	Solanaceae	vellumattai	Leaves	Poultice	External	Rheumatic pains
70	<i>Dolichos lablab</i> L.	Fabaceae	Avarai	Leaves	Infusion	Internal	Check excessive bleeding during menstruation
71	<i>Eclipta alba</i> L.	Asteraceae	Karisilankanni	Leaves	Extract	Internal	Jaundice

72	Eichhorniacrassipes Mart.	Pontederiaceae	Akasathamara	Whole plant	Poultice	External	Goitre
73	EleusineindicaGaertn.	Gramineae	Thipparagi	Whole plant	Decoction	Internal	Kidney Stones
74	Erythrinaindica Lam.	Leguminosae	Kaliyanamurukku	Leaves	Decoction	Internal	Fever
75	Eucalyptus globulusLabill.	Myrtaceae	karpuramaram	Leaves	Decoction	Internal	Whooping cough
76	Euphorbia tirucalli L.	Euphorbiaceae	Tirukalli	Stem	Infusion	Internal	Bladder Stones
77	Euphorbia antiquorum L.	Euphorbiaceae	Vachirrom	Latex	Poultice	External	Ear-ache
78	Euphorbia hirta Lin.	Euphorbiaceae	Pathchiarissi	Leaves	Poultice	External	Wound local bleeding
79	Euphorbia pulcherrimawilld.	Euphorbiaceae	Magilkunni	Leaves	Poultice	External	Skin diseases
80	Ficusbengalensis L.	Moraceae	Aalamaram	Bark	Infusion	Internal	Diabetes
81	Ficusreligiosa L.	Moraceae	Arasamaram	Bark	Infusion	Internal	Diabetes
82	Gardenia jasminoidesEllis .	Rubiaceae	Cape Jasmine	Leaves	Poultice	External	Head-ache
83	Gossypiumherbaceum L.	Malvaceae	Panji	Seed	Infusion	Internal	Painful menstrual Periods
84	Hamelia patens Jacq.	Rubiaceae	Scarlet bush	Fruit	Juice	Internal	Dysentery
85	Helianthus annuus L.	Asteraceae	Suryakanti	Leaves	Poultice	External	Wounds
86	Heliotropiumindicum L.	Boraginaceae	Telkodduki	Leaves	Extract	Internal	Ulcer
87	HemigraphiscolorataNees.	Acanthaceae	Red Ivy	Leaves	Decoction	Internal	Urinary Problems
88	Hibiscus-rosa-sinensis L.	Malvaceae	Semparuthi	Root	Decoction	Internal	Cough
89	Impatiensbalsamina L.	Balsaminaceae	Kasittumbai	Flower	Poultice	External	Joint pain
90	Ipomoea aquaticaForsk.	Convolvulaceae	Koilanguvellaikeerai	Whole plant	Decoction	Internal	General weakness
91	Ipomoea pes-caprae L.	Convolvulaceae	Adambu	Leaves	Paste	External	Painful finger nail
92	JasminumSambac L.	Oleaceae	Adukkumalli	Flower	Paste	External	Check the secretion of milk
93	Jasminumgrandiflorum L.	Oleaceae	Jathimalli	Flower	Paste	External	Head-ache
94	Jatropha gossypifolia L.	Euphorbiaceae	Atalai	Bark	Decoction	Internal	Promote menstruation
95	Lantana camara L.	Verbenaceae	Arippu	Leaves	Decoction	External	Skin diseases
96	Leucasasperaspreng.	Lamiaceae	Thumbai	Leaves	Infusion	Internal	Fever
97	Lycopersiconesculentum Mill.	Solanaceae	Thakkali	Fruit	Raw	Internal	Arthritis
98	Mangiferaindica L.	Anacardiaceae	Mamidi	Leaves	Decoction	Internal	Asthma
99	Marantaarundinacea L.	Marantaceae	Araruttukkilangu	Root	Poultice	External	Insect bite
100	Menthaspicata L.	Lamiaceae	Pudina	Whole plant	Decoction	Internal	Nursing mothers may increase

							the flow of Milk
101	Millingtoniahortensis L.	Bignoniaceae	Mara-malli	Root	Decoction	Internal	Food poisoning
102	Mirabilis jalapa L.	Nyctaginaceae	Andhimalligai	Flower	Paste	External	Skin diseases
103	Momordicacharanta L.	Cucurbitaceae	Pakal	Fruit	Raw	Internal	Anaemia
104	Morindacitrifolia L.	Rubiaceae	Manjatbavattai	Leaves	Juice	External	Gout pains
105	Morusnigra L.	Moraceae	Musuketta	Fruit	Raw	Internal	Anaemics
106	Moringaoleifera Lam.	Moringaceae	Murungai	Leaves	Cooked	Internal	Scurvy
107	Murrayakoenigii.L.	Rutaceae	Karuvembu	Leaves	Decoction	Internal	Purifying the blood
108	Musa paradisiaca L.	Musaceae	Vazhai	Fruit	Raw	Internal	Anaemia
109	Mussaendaglabrata Hutch.	Rubiaceae	Vellaiyilai	Flowers	Decoction	Internal	Asthma
110	Nerriumindicum Mill.	Apocynaceae	Arali	Flower	Decoction	External	Kill lice
111	NelumbiumspeciosumWilld.	Nymphaeaceae	Ambal	Root	Paste	External	Skin problems
112	Nymphaea lotus Roxb.	Nymphaeaceae	Allitamarai	Flower	Infusion	Internal	Vomiting
113	Ocimumbasiliurm L.	Lamiaceae	Tirnirupachai	Root	Extract	Internal	Tuberculosis
114	Ocimum sanctum L.	Lamiaceae	Karuttulasi	Leaves	Extract	Internal	Cough
115	Phyllanthusemblica L.	Euphorbiaceae	Amalagam	Fruit	Raw	Internal	Anaemia
116	Phyllanthusfraternus Web.	Euphorbiaceae	Kizhanelli	Leaves	Decoction	Internal	Diabetes
117	PhyllanthusacidusSkeels.	Euphorbiaceae	Arunelli	Root	Paste	External	Skin ailments
118	PlumeriaacuminataAit.	Apocynaceae	Temple tree	Bark	Decoction	Internal	Asthma
119	Punicagranatum L.	Punicaceae	Madulam	Leaves	Extract	Internal	Dysentery
120	Syzygiumcumini L.	Myrtaceae	Neredam	Seed	Powder	Internal	Diabetes

METHODOLOGY

Bimonthly field visits were regularly conducted for a period of one year, duration of each field trips being 2 to 3 days. Plants were collected, studied and identified using Gamble (1935). Ample field data regarding their medicinal characteristics and use in treatment of common ailments in the said study area were collected by face to face interview of local people and from local traditional medicine practitioners.

RESULT AND DISCUSSION

The present investigation revealed the peculiar traditional art of healing diseases using decoction, infusion, extract, powder and raw materials of plants. The secret of health kept within the green bags of nature is wide and far beyond human comprehension. From the rural areas of Thovalai Taluk, healing properties of medicinal plants of diverse types were documented. Among them 120 medicinal plant species with therapeutic potential, their Botanical name followed by family name, Tamil name, parts used, mode of preparation, mode of application and ailments / diseases treated were presented in Table 1. Among the plants studied Euphorbiaceae represents the highest number of species (9 species) followed by Malvaceae, Leguminosae, Moraceae and Lamiaceae (5 species each) and cucurbitaceae, Rubiaceae, Apocynaceae and Convolvulaceae (4 species each) and Acanthaceae, Caesalpiniaceae, Rutaceae, Solanaceae, Asteraceae and Gramineae (3 species each). 13 families were represented by 2 species and 31 by single species. Regarding the plant parts used, leaf is the mostly used plant part (47) to treat a particular disease followed by fruit, root, flower, seeds, whole plant, bark, stem and rhizome. Most of the earlier ethno-botanical studies confirmed that leaf is the major part of the plant used in the treatment of diseases (Ayyanar et al., 2008) and (Shanmugam *et al.*, 2008). The Species identified

were able to cure about 74 common ailments as mentioned in Table 1.

CONCLUSION

In the Present study, 120 plant species of medicinal importance were recorded and documented. The majority of the reported medicinal plant species were also found to be rare. These demand an urgent attention to conserve such vital resources so as to optimize their use in the primary healthcare system. Hence, it is our duty to preserve and protect them for the well being of ourselves and our future generations.

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