



Conservation status in miniature sacred groves in theerthagirishwarar temple, theerthamalai, Dharmapuri

Katharbasha¹, Dhamodaran Vijaya^{2*}

¹ Research Scholar, Department of Botany, Government Arts College, Dharmapuri, Tamil Nadu, India

² Associate Professor and Head, Department of Botany, Government Arts College, Dharmapuri, Tamil Nadu, India

Abstract

The status of sacred groves in Theerthagirishwarar temple, of Theerthamalai, Harur taluk, Dharmapuri was undertaken. The study confirms sacred groves are environmentalists paradise; urbanists medicinal plants life garden; botanists wild species laboratory. Sacred grooves are helpful in checking the phytogeographic history: 107 species are present altogether in the vegetation; Of these 40 species are Pantropical elements and 58 species are Asiatic elements which were dominant and co-dominant, followed by the 12 species endemic to the Western Ghats and South-Western Ghats as the co-dominant group. Altogether, these groups comprised almost 54% of the vegetation and reflect that this region has been bestowed with good natural vegetation for a long time. It can be argued that the rest of the species are drawn from the neighboring phytogeographical domains. The remaining elements occupied a low position, compared to the above. The plants are presented in three layers such as herbs, shrubs, trees in sacred area. The flora is also rich in epiphytes, lianas, climbers, tendrils etc. In contrast, in the non-sacred area, more surface area is occupied by herbs, followed by thorny shrubs, xerophytes, invasive weeds and cultivated crops. The status of sacred groves is preserved indicated by the presence of rare and threatened plants in sacred groves. The traditional knowledge about natural resources and their value was documented. The conservation status of Theerthagirishwarar temple was better than the adjacent lands.

Keywords: Theerthamalai, Theerthagirishwarar temple, sacred groves, biodiversity composition, conservation status

Introduction

The degradation of tropical forests and destruction of habitat due to anthropogenic activities are the major causes of decline in the global biodiversity. The high price of extinction of tropical species is annoyed by the conversion of forest land for agriculture, harvesting non-wooden woodland merchandise, extraction of mature bushes, accumulating fuel wood and plantation which threatens to erode the biodiversity significantly (Mishra *et al.*, 2004 ^[1]; Laloo *et al.*, 2006) ^[2]. In this context, conservation of biodiversity requires reorientation of strategies where traditions are also integrated (Ramakrishnan *et al.*, 1998) ^[3]. Knowingly or unknowingly, our forefathers had preserved the sacred groves and treated these as sanctimonious places. Invariably, places of worship were built in the vicinity or in the midst of these groves. The sacred groves, depending on their geographical locations, varied in their composition and contents. However, owing to demographic pressure, some of them had become degraded and this led to the loss of precious species. C. Achalender Reddy, Member-Secretary of the National Biodiversity Authority, Chennai, said that of the supposedly one lakh sacred groves in the country 14,000 had been listed. And it bespoke of the volume of documentation left to be done about the sacred groves. Mr. Reddy called upon authorities to declare sacred groves as “biological heritage sites.”

Nanditha Krishna, director of the C. P. R. Environmental Education Centre, Chennai, said that the centre was restoring sacred groves at the rate of 10 every year. So far, it had restored 44 and the restoration of eight more was under way. The restoration was done pragmatically by gathering knowledge of local tree and plant species from the elders and with the involvement of the local community. Sacred

groves (forest) are a group of trees or a patch of vegetation protected by the local people through religious and cultural practices evolved to minimize destruction (Israel *et al.*, 1997 ^[4]; Jeeva and Anusuya, 2005 ^[5]; Jeeva *et al.*, 2005) ^[6]. Typically, sacred groves are believed to be a treasure house of medicinal, rare and endemic flora, as *refugia* for relic flowers of a region and as facilities of seed dispersal (Whittaker, 1975). Their plant wealth and conservation capacity have been awesome sufficient to renowned them as 'mini biosphere reserves' (Gadgil and Vartak, 1975) ^[7]. Predominant issues like constantly increasing human habitation surrounding the sacred grove regions, poverty, illiteracy amongst big region of the population, continuous area shrinking, over exploitation, land conservation are to be considered even as assessing the conservation importance of each sacred grove sites (Anbarashan and Padmavathy, 2010) ^[8]. The status of sacred groves the role and effectiveness of the sacred edicts in the conservation of forest stands composed of plant species of this deciduous forest the composition and sustainability of tree stands outside the sacred areas. (Katharbasha and dhamodaran vijaya, 2024) ^[14].

In South India mainly in Tamil Nadu, the neighborhood rural humans have an indigenous antique tradition of maintaining small patches of old growth forests as part of their lifestyle and spiritual notion, these forests are known as Sacred Groves, regionally as “Kovil kadugal” they're wealthy in biodiversity (Sukumaran, 2002 ^[9]; Anbarashan and Padmavathy, 2010) ^[8]. They are composed of several floras with medicinal, rare, endemic, threatened, wood and fuel wood timber yielding plants (Sukumaran and Raj, 2007 ^[10]; Sukumaran *et al.*, 2007a) ^[11]. About 60% of the flora found in groves is medicinal, of which simply 28%

serves as people medicines. Sacred groves the conservation wallet of neighborhood biodiversity, edicinally and economically crucial plants for destiny uses (Sukumara *et al.*, 2006, 2007b) ^[13]. In Dharmapuri district, even though many sacred grooves have been reported and recorded in literature, not much work has been done on one of the ancient groves the Theerthagirishwarar temple located in Theerthamalai in Harur Taluk. Harur is located at 12°04'N 78°30'E / 12.07°N 78.5°E / 12.07; 78.5. It has an average elevation of 350 meters (1148 feet). This temple is situated in the hill lock and not easily accessible by public transport. This makes the sacred groves more interesting and important. So, in the present study this groves has been selected for studying the conservation status and economic value of this sacred grove.

The main objectives of the study were to investigate:

1. the role and effectiveness of the sacred edicts in the conservation of forest stands composed of plant species of this deciduous forest;
2. The composition and sustainability of tree stands outside the sacred areas; the social sustainability of the traditional edicts that create sacred groves;
3. The effectiveness of sacred groves relative to official environmental legislation.
4. The floristic richness of the sacred groves and highlights their botanical significance.
5. Ethnobotanically (Medicinal value), these areas remain unexplored and no comprehensive account on local traditional knowledge is available.

Materials and methods

Information about sacred Groove

The present study was conducted in Theerthagirishwarar temple, Harur Taluk, Dharmapuri district of Tamil Nadu, southern peninsular India (latitudes N 11 47' and 12 33' and longitudes E 77 02' and 78 40'.), located in part of southern Western Ghats.

Data Collection

Field visits were conducted for a period of one year between 2021 and 2022 with regular intervals Plants either with flowers or fruits were collected and identified or confirmed with available regional floras (Gamble 1915 – 1936;

The social survey and theoretical framework

The social survey, conducted from 2021 and 2022, involved three main types of social contacts: semi-structured interviews and individual discussions; group discussions; and social observation. Fifty people were interviewed in the villages of Andiyur, Poyyapatti, Mondukuzhi, Kurumpatti and proximate areas.

Results

Topographically, it is in the hill lock and it has prominent natural features such as richly varied and crowded vegetation, majestic undulating hills with surrounding plains and coconut plantations. During field visits to the sacred groves (fig. 1) Survey was conducted to gather information on sacred trees, taboos, deities, festivals, priests, and cultural aspects through personal contacts and questionnaires and by interviewing villagers, temple authorities, and various social organizations. Though these groves are located in close proximity to the villages, (table 1) A major portion of the groves remains undisturbed.

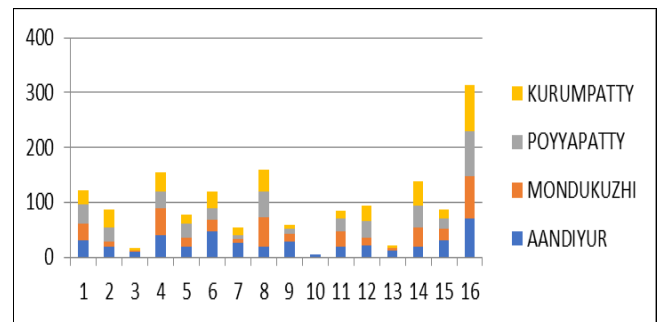


Fig 1: Results of social survey in the neighbouring villages of sacred groves

Table 1: Vegetation of sacred groves and non-sacred grove forest

Variables (per 100 m2 quadrat)	Sacred Groves	Non-Sacred Groove
Dominants	Trees dominate; shrubs and grasses around the edges	Trees dominate; shrubs and grasses in Small patches. Fewer grass patches.
Canopy structure	Continuous, with local fragmentation. Stunted trees around edges.	Continuous and similar, but taller trees. Fewer stunted trees.
Tree species	Average of 23 per quadrat, e.g. Tamirandus and Albizia, Ervatamia, Wrightia, Gyrocarpus	Average of 25 per quadrat, Neem, <i>Azadirachta indica</i> rare; <i>Cocus nucifera</i>

Table 2: List of plant species in sacred and non-sacred grove area and their ecological status

S. No	Plant Name	Family	Ecological Status	Sacred Grove	Non-Sacred Grove
1	<i>Acacia caesia</i> G.don	Mimosoideae	Common	+	+
2	<i>Acacia Ferruginea</i> DC	Mimosoideae	rare	—	+
3	<i>Acalypha indica</i> L.	Euphorbiaceae	common	+	—
4	<i>Achyranthu s aspera</i> , L	Amaranthaceae	common	+	+
5	<i>Adathoda vasica</i> , Nees	Acanthaceae	common	—	+
6	<i>Aegle marmelus</i> , Corr.	Rutaceae	indigenous	+	+
7	<i>Aerva lanata</i> , juss	Amaranthaceae	threatened	+	+
8	<i>Ageratum conyzoides</i>	Compositae	Common invasive	—	+
9	<i>Alangium decapetalum</i> , Lam	Alaginaceae	occasional	+	—
10	<i>Aloe vera</i> , L	Lilliaceae	common	—	+
11	<i>Ammannia multiflora</i> , roxb	Lythraceae	Introduced common	+	—
12	<i>Amaranthus viridis</i> , L	Amaranthaceae	Cultivated common	—	+
13	<i>Albizia amara</i> , (Roxb)	Mimosoideae	Introduced common	+	+

14	<i>Alternanthera sessilis, R. Br</i>	Amaranthaceae	Invasive common	+	+
15	<i>Andrographis paniculata,</i>	Acanthaceae	Indigenous common	—	+
16	<i>Anisomeles malabarica,</i>	Lamiaceae	Rare	—	+
17	<i>Anona squamosa, L.</i>	Anonaceae	Common cultivated	+	+
18	<i>Argemone mexicana, L.</i>	Papaveraceae	Introduced occasional	—	+
19	<i>Atlantia monophylla</i>	Rutaceae	rare	—	+
20	<i>Azadiracta indica, A. Juss.</i>	Meliaceae	Common indigenous	+	+
21	<i>Bambusa arundinaecea, Willd</i>	Gramineae	threatened	+	—
22	<i>Barleria buxiflora, L.</i>	Acanthaceae	common	+	—
23	<i>Barleria longiflora, L. F</i>	Acanthaceae	endemic	+	—
24	<i>Barleria prioritis</i>	Acanthaceae	rare	+	—
25	<i>Bauhinia spicata, L.</i>	Caesalpiniaceae	occasional	+	—
26	<i>Bauhinia tomentosa, L.</i>	Caesalpiniaceae	Occasional	+	+
27	<i>Boerhaavia diffusa, L.</i>	Nyctaginaceae	common	+	+
28	<i>Caesalpineia crista, Willd.</i>	Caesalpiniaceae	occasional	+	—
29	<i>Cardiospermum halicacabum, L.</i>	Sapindaceae	endemic	+	+
30	<i>Calotropis gigantea R.Br,</i>	Ascylopodiaceae	common	—	+
31	<i>Cassia auriculata, L.</i>	Caesalpiniaceae	common	+	+
32	<i>Cassia fistula, L</i>	Caesalpiniaceae	common	—	+
33	<i>Cathrandhus roseus,</i>	Apocynaceae	common	+	—
34	<i>Celosia argentea, L.</i>	Amaranthaceae	Introduced common	+	—
35	<i>Cenchrus ciliaris, L.</i>	Gramineae	endemic	+	+
36	<i>Chloris barbata, SW</i>	Gramineae	Invasive common	+	+
37	<i>Choemelia asiatica, O. Kze</i>	Rubiaceae	common	+	—
38	<i>Cissus quadrangularis, L.</i>	Vitaceae	common	+	—
39	<i>Citrus aurantium, L.</i>	Rutaceae	common	+	—
40	<i>Cleome viscosa,</i>	Capparidaceae	Introduced common	+	+
41	<i>Coccoloba nucifera, L</i>	Arecaceae	Introduced common	+	—
42	<i>Coccinia indica, W&A.</i>	Cucurbitaceae	Indigenous common	+	+
43	<i>Commelina bengalensis, L.</i>	Commelinaceae	Introduced common	+	—
44	<i>Courcopita guianensis,</i>	Lecythidaceae	threatened	+	—
45	<i>Croton sparciflorus</i>	Euphorbiaceae	Indigenous common	+	+
46	<i>Cynodon dactylon, Pers</i>	Cyperaceae	common	+	+
47	<i>Cyperus tegetum, Roxb.</i>	Cyperaceae	Invasive and cultivated	—	+
48	<i>Datura metal, L.</i>	Solanaceae	common	+	—
49	<i>Dodonaea viscosa, L.</i>	Sapindaceae	common	—	+
50	<i>Emilia scabra, DC.</i>	Compositae	rare	+	—
51	<i>Ervetamia coronaria, stapf.</i>	Apocynaceae	endemic	+	—
52	<i>Euphorbia hirta</i>	Euphorbiaceae	Indigenous common	—	+
53	<i>Euphorbia serpens</i>	Euphorbiaceae	endemic	+	—
54	<i>Evolvulus alsinoides, L.</i>	Convolvunaceae	endemic	—	+
55	<i>Foeniculum vulgare, Gaertn.</i>	Apiaceae	Cultivated common	+	—
56	<i>Ficus bengalensis, L.</i>	Moraceae	occasional	+	—
57	<i>Flueggea leucopurus, Willd</i>	Euphorbiaceae	threatened	+	+
58	<i>Galinsoga parviflora, Cav.</i>	Compositae	common	+	—
59	<i>Gloriosa superba, L.</i>	Liliaceae	threatened	—	+
60	<i>Gynandropis pentaphylla, DC.</i>	Capparidaceae	Indigenous common	+	+
61	<i>Gyrocarpus jacquini, Roxb</i>	hernandiaceae	endangered	+	—
62	<i>Heminontis orifolia,</i>	Pteridaceae	occasional	+	—
63	<i>Hyptis suaveolens, Piot.</i>	Lamiaceae	Introduced common	+	—
64	<i>Indonesiella echiodes, L.</i>	Acanthaceae	rare	+	—
65	<i>Ipomea obscura, K-Gawl</i>	Convolvunaceae	rare	+	—
66	<i>Jatropha galandifera; Roxb</i>	Euphorbiaceae	occasional	—	+
67	<i>Justicia diffusa, Willd.</i>	Acanthaceae	occasional	+	+
68	<i>Justicia montana, Wall.</i>	Acanthaceae	occasional	+	—
69	<i>Lantana camara, L.</i>	Verbiaceae	Common invasive	+	+
70	<i>Leonotis nepetifolia, R. Br</i>	Lamiaceae	Exotic rare	+	—
71	<i>Lepidagathis pungans, Nees</i>	Acanthaceae	occasional	+	—
72	<i>Leucus aspera, Spr</i>	Lamiaceae	endemic	+	+
73	<i>Leucus pubescens, Benth</i>	Lamiaceae	Occasional	+	—
74	<i>Malva sylvestris, L.</i>	Malvaceae	Common	+	+
75	<i>Melia azadiracta</i>	Meliaceae	Common indigenous	—	+
76	<i>Mullugo pentaphylla, L.</i>	Aizoaceae	Indigenous common	+	—
77	<i>Nyctanthus orbor-tristis, L</i>	Nyctaginaceae	occasional	+	—
78	<i>Ocimum canam</i>	Lamiaceae	occasional	+	+
79	<i>Oplismenus compositus, Beauv.</i>	Gramineae	common	+	+
80	<i>Opuntia a dillenii, Haw</i>	Cactaceae	Common	—	+
81	<i>Oxalis coriculata</i>	Oxaliaceae	common	—	+

82	<i>Parthenium isoporos,</i>	Asteraceae	Common invasive	+	+
83	<i>Pauzozlia cymosa, Hkf</i>	Uriticaceae	Rare threatened	+	—
84	<i>Pauzozlia acuta, W</i>	Uriticaceae	rare	+	—
85	<i>Pavonia odorata, willd</i>	Malvaceae	occasional	+	—
86	<i>Phyllanthus amarus Shum&Thonn</i>	Enphorbiaceae	common	—	+
87	<i>Pithecelobium dulce, Benth</i>	Mimosaceae	common	+	—
88	<i>Plumbago auriculata, Poir</i>	Plumbaginaceae	common	+	+
89	<i>Podocarpus tatilolia Wall</i>	Coniferae	threatened	+	—
90	<i>Polycarpea corymbosa, Lam.</i>	Caryopillaceae	occasional	—	+
91	<i>Pongamia glabra, Vent.</i>	Fabaceae	common	—	+
92	<i>Portulaca oleracea L.</i>	Portnlacaceae	occasional	+	—
93	<i>Prosopis picigera L.</i>	Leguminaceae	common	+	—
94	<i>Scaevol frutescens Krans</i>	Goodeniaceae	vulnerable	+	—
95	<i>Solanum nigrum L.</i>	Solanaceae	common	+	—
96	<i>Solanum torvam Sw</i>	Solanaceae	Common cultivated	+	+
97	<i>Strychnos nuxvomica L.</i>	Loganiaceae	vulnerable	—	+
98	<i>Stenotobium stansD.don</i>	Bignoniaceae	common	+	—
99	<i>Tamarindus indica L.</i>	Caesalpinaceae	Introduced common	+	+
100	<i>Tephrosia villosa W&A</i>	Leguminosue	endemic	+	—
101	<i>Thespesia populnea Cav.</i>	Malvaceae	common	—	+
102	<i>Tribulus terrestris L.</i>	Zygophytaceae	Indigenous common	+	—
103	<i>Vicoa indica DC</i>	Astearceae	common	+	+
104	<i>Wrightia tinctoria R. Br</i>	Apocynaceae	occasional	+	+
105	<i>Zizyphus jujuba Lam</i>	Rhamnaceae	Introduced common	—	+
106	<i>Zizyphus nummalaria W&A</i>	Rhamnaceae	endemic	—	+

Differences between the floristic composition of sacred and nonsacred grove

Variable	Sacred grove	Non-sacred
Species diversity	Moderate biodiversity 12-14- species per 100 m2 quadrat.	Low biodiversity: 10-12 species per 100 m2 quadrat.
Dominants	Trees generally dominant: grasses in patches. Large numbers of bryophytes and pteridophytes.	Grass and shrubs, succession favouring shrubs. Bryophytes and pteridophytes were completely lacking
Canopy structure	Mostly tree, areas form a continuous canopy.	Fragmented shrub canopies. Grasses Usually scattered.
Canopy height	Shrub canopy 160-200 cm. Some trees sprout up to 4 m. Grasses up to 120 cm. Shrub canopy averages 120-170 cm.	Grasses average 20-60 cm in height.
Number of tree species	10-70% of growing plants may be tree species. Most trees are Tamirandus and Albizia, Ervatamia Wrightia, Gyrocarpus	Less than 10% of growing plants may be tree species. Neem grows more often and xerophytes like opuntia, and thorny shrubs Like Lantana, Croton Sparsiflorus, Cardiospermum Halicacabum were also seen only in this area.

Medicinal plants

- Acacia caesia, G.don.* Mimosoideae. leaves in bronchitis.
- Acacia catechu* (Linnf.) Willd (Khair). Mimosaceae, Karunkali. The bark of the tree is used in chronic diarrhea.
- Acacia Ferruginea, Wild.* Mimosoideae. banni a sacred tree
- Acalypha indica* L. Euphorbiaceae, Kuppaimeni. A leaf paste, mixed with common salt, is used to cure eczema and chest pain.
- Achyranthes aspera* L. Amaranthaceae, Naayuruvi. The boiled leaves are consumed to relieve internal piles and the roots are used as a brush to relieve pain and clean the teeth.
- Adathoda vasica* Nees. Acanthaceae. aduthoda- the leaves are used in the treatment of cough and asthma.
- Aegle marmelos* Corr.ex. Roxb., Rutaceae, Vilvam. A Leaf paste is applied topically to heal wounds. The dried and powdered leaves are used for diabetes.
- Aerva lanata* Juss. Amaranthaceae-kannupeelai. It is used as a diuretic agent and treatment of poisonous bites.
- Ageratum conyzoides* L. Compositae leaves is used in psoriasis.
- Alangium decapetalum* Lam. Alaginaceae, alingi. It is used in the treatment of rheumatic fever and in eye diseases.
- Albizia amara* (L.) Benth, Mimosaceae, A leaf paste is applied to cure eczema.
- Aloe vera* (Linn.) Burm. Agavaceae, Sotrukatrzhai. Fresh juice is used as cathartic and for cooling. It is also used in treating fever eye infections and ulcer.
- Ammannia baccifera* L., Lythraceae, Neerma Ineruppu. A leaf paste is applied to relieve swelling.
- Amaranthus viridis*, L. Amaranthaceae. araikeerai it is rich in iron content and it is regularly used as green vegetable
- Alternanthera sessilis*, R. Br. Amaranthaceae. ponnangani keerai. It is a cultivated as green vegetable
- Andrographis paniculata* (Burm.f.) Wallich ex Nees. Acanthaceae, Nilavaambu. A handful of leaves is taken and an extract is made, which, mixed with milk, is taken internally to cure snakebites.
- Anisomeles malabarica* (L.) R. Br. ex Sims., Lamiaceae, Peithumbai. A paste of the leaves is applied to cure eczema.

18. *Annona squamosa* L. Annonaceae, Sitapali. The young fruits are dried and made into a powder. A spoonful of this powder, mixed with water, is taken internally to cure dysentery.
19. *Argemone Mexicana* L. Papaveraceae, Narimirati. The yellow latex is used to cure ulcers of the lips, pimples and for wound healing.
20. *Atlantia monophylla* L. Rutaceae kattuelumichai. It is used in treating skin infection.
21. *Azadirachta indica* (A. Juss). Meliaceae, Vembu. Seed oil is used in skin diseases and in lice. Bark is useful in malarial fever. Tender twigs are used as tooth brush. Leaf paste applied for mumps.
22. *Bambusa arundinacea* (Willd). Poaceae, Moongil. Young leaves and terminal bud of bamboo along with turmeric and the leaves. Aloe Vera is ground and the paste is applied to the fractured bones for two weeks to join quickly
23. *Barleria longiflora* L Acanthaceae. Ili nirmu. used in wound healing
24. *Barleria boxifolia*. L. Acanthaceae. Rosemulli. used in wound healing stomach ache, diuretic, anthelmintic
25. *Barleria prionitis*, L. Acanthaceae. Kaatukanagambaram. Used in wound healing
26. *Bauhinia spicata*, L. Caesalpiniaceae. Kokkumandharai. For cough, convulsion and constipation to pneumonia and venereal diseases
27. *Bauhinia tomentosa*, L. Caesalpiniaceae. Kanjini. For cough, convulsion and constipation to pneumonia and venereal diseases
28. *Boerhaavia diffusa*, L. Nyctaginaceae. Vaadhuru.mookaratai. root paste applied topically to treat hydrocele.
29. *Caesalpinia crista* Willd. Caesalpinaceae. Latha karanja. used in the treatment of diabetes and intermitant fevers, antispasmodic, arthritis, rheumatoid, etc
30. *Calotropis gigantea* (L.) R. Br. Asclepidaceae, Erukku. Milky latex is applied on the wounds on legs of livestock.
31. *Cardiospermum halicacabum* L. Sapindaceae, Mudakathan. A leaf paste is applied for joint pain or leaves are prepared in the form of a soup and consumed to cure rheumatic pain
32. *Cassia auriculata* L. Caesalpiniaceae, Aavaram. Dried and powdered flowers are used for cleaning the hair, reducing body heat and cures diabetes.
33. *Cassia fistula*, L. Caesalpiniaceae, Manjalkondrai. it is used as wormicide in treatment of ring worm. The tree is a sacred tree in India.
34. *Catharanthus roseus* G. Don. Apocynaceae, Nithyakalyani. Whole plant is powdered and mixed with cow's milk and taken orally to treat diabetes.
35. *Celosia argentea*, L. Amaranthaceae, kolikondai. Anti-inflammatory, antidiarrhoeal, sores, ulcers, skin eruptions.
36. *Cenchrus ciliaris*, L. Gramineae, soil binder ad soil fixer, fodder and lawn making.
37. *Cheomelia asiatica*, O. Kze, Rubiaceae, Therani. root juice used as eye drops in eye diseases of cattle.
38. *Cissus quadrangularis* L. Vitaceae, Pirandai. A paste of the whole plant is taken for improving the digestion and inducing appetite.
39. *Citrus aurantifolia* (Christm.) Swingle, Rutaceae, Elumicchai. Juice of the fruit with few drops of pure honey is administered orally to get rid of throat infection
40. *Cleome viscosa*, L. Capparidaceae, naikadugu. It is used in the treatment of headache. Leaf paste applied toicalyto heal wound
41. *Coccinia grandis* (L.) J. Voigt, Cucurbitaceae, Kovai. The leaf extract, mixed with milk, is used in cases of jaundice.
42. *Cocus nucifera*, L. Arecaceae. Thennai. Religious. The oil used as food and treatment of many skin disease
43. *Commelina bengalensis*, L. Commelinaceae. Kaanalpoondu. Whole plant to treat leprosy
44. *Courcopita guianensis*, Lecythidaceae. Nagalinga. It is a sacred tree. The flower resembles god shiva and is so considered religious.
45. *Crotons sparsiflorus*, Mor. Euphorbiaceae. It is used in wound healing
46. *Cynodon dactylon* (L.) Pers. Cyperaceae, Arugampul. The juice of the whole plant is used to reduce body heat Band to lower the blood pressure.
47. *Cyprus tagetum*, Roxb. Cyperaceae. korai. The decoction is used as diuretic.
48. *Datura metel* L. Solanaceae, Oomathai. Few drops of leaf juice is poured into ear to treat earache.
49. *Dodonea viscosa*, L. Sapidaceae. veraali. it is used in the treatment of skin inflammation. Also used in fast recovery from bone fracture
50. *Emilia scabra*, DC. Compsitae leaf juice in treating eye inflammation. Root in diarrhea.
51. *Ervatamia coronaria*, Stapf. Apocynaceae. Nandhyavattamar. sacred tree. Flowers used in eye infection.
52. *Euphorbia hirta* L. Euphorbiaceae, Amman patcharisi. Leaf paste mixed with goat's milk is consumed to stop diarrhea and dysentery.
53. *Euphorbia serbens* L. Euphorbiaceae
54. *Evolvulus alsinoides*, L. Convolvulaceae, Visnukirandhi. In bronchitis, asthma, vitiated coditons of ptt, epilepsy, internal haemorrhages, dysentery, diarrhea etc.
55. *Ficus benghalensis* L. Moraceae, Aalamaram. Stem latex is applied topically on heel cracks.
56. *Flueggea leucopyrus* Willd. Euphorbiaceae, Venpoolaa. leaves boiled and taken twice a day for stomach ache.
57. *Foeniculam vulgare*, Gaertn. Sombu. Cough, bronchitis, ophthalmopathy, dyspepsia, cardiac disease.
58. *Galinsoga ciliate* Cav. Asteraceae. A feeble narcotic used as pain reliever.
59. *Gloriosa superb* L. Liliaceae, Kanthal malar. The pasted tubers are used as an abortifacient. Leaves are used to destroy head lice.
60. *Gyrocarpus jacquini*, Roxb. Hernandiaceae. Thannakku it is used to reduce the belly.
61. *Gynondropsis pentaphylla* DC. Capparidaceae. Leaf juice for ear ache.
62. *Hemiontis orifolia*, Pteridaceae. Ramarbanam
63. *Hyptis suaveolens*, Poit Lamiaceae. Vilyati tulsii. Leaf decoction is used to wash skin with boils and eczema.
64. *Indoneesiella echiodes* L. Acanthaceae. Neermulli. used in treatment of liver disorder and as a diuretic.

65. *Ipomea obscura* K-Gawl. Convolvunaceae. siruoonam. warmed leaves ground with castor oil and applied on blisters.
66. *Jatropha glandifera* Roxb. Euphorbiaceae. Kattuamanakku. It is used in the treatment of skin infection.
67. *Justicia diffusa* Willd. Acanthaceae. Shivanar vembu. It is used in the treatment of skin disease and stomach pain, and tooth decay.
68. *Lantana camara* L. Verbenaceae. Unnicheddi. It is used in the treatment of skin infection and in rheumatic pain.
69. *Leonotis nepetaefolia* R.Br. Lamiaceae. Mildly narcotic, excellent heart tonic, able to calm palpitations and womb prolapsed.
70. *Lepidagathis pagans* Nees. Acanthaceae
71. *Leucas aspera* (Willd). Lamiaceae, Thumbai. The vapours from the boiled leaves are inhaled to relieve coughing and cold.
72. *Leucas pubescens*, Benth. Lamiaceae.
73. *Malva sylvestris* L. Malvaceae. Excellent demulcent in coughm irritations, known as anti cancer property.
74. *Melia azadirarachta* L. Meliaceae, Malaivembu. The juice of the bark is taken internally in the early morning for three days in order to relieve stomach pain; it is also employed as an anti-head ache.
75. *Mollugo pentaphylla* L. Aizoaceae. Leaves boiled in water and taken for cooling purpose.
76. *Ocimum canum* Sims, Lamiaceae, Naaithulasi. Leaf juice is taken for stomach upset.
77. *Oplimemus composites* Beauv. Graminae
78. *Opuntia dillenii* (Haw). Cactaceae, sappathikalli. Fruits edible used in whooping cough. Pulp also applied in ophthalmic and control spasmodic cough and expectoration.
79. *Oxalis coriculata*. L. Oxalidaceae. puliyarai, leaf or leaf juice is taken orally to check dysentreey.
80. *Parthenium isoporus* Wild. Asteraceae
81. *Pauzolzia indica* W. Uriticaceae. Visha karappan. Powder of leaf, stem, flower along with stem is applied externally before bath for insect and scorpion bites
82. *Pauzolzia cymosa* Hk. Uriticaceae, perun-karappan. Leaves decoction used to cure skin diseases
83. *Pavonia odorata* Willd Malvaceae. Roots in the treatment of hal painook worm and abdomi
84. *Phyllanthus amarus* Schum. And Thonn. Euphorbiaceae, keezhanelli. Leaf juice is administered to cure fever and jaundice.
85. *Pithecolobium dulce* Benth. Mimosaceae. Kodukapuli known for its antiinflammatory property.
86. *Plumbago acutifolia* Poir. Plumbaginaceae. Venkodi veli leaves for indigestion, root paste for maggot infested sores, stem bark for rotting.
87. *Podocarpus latifolia* Wall Coniferae
88. *Polycarpaea corymbosa* L. Caryophyllaceae, Malligaimottuchedi. Roots, leaves paste is applied externally on wounds and cuts.
89. *Portulaca oleracea* L. Portulacaceae. Used against internal parasites, a blood cleanser, and to refresh digestive system.
90. *Pongamia pinnata* L. Fabaceae, Pongam. The seed oil is used to cure rheumatic pains and swellings.
91. *Prosopis cinearia* L. Mimosaceae, Vannimaram. The plant flower is pounded, mixed with sugar and used during pregnancy as safeguard against miscarriage. The bark is used as a remedy for rheumatism, in cough cold, asthma. The bark is prescribed for scorpion sting.
92. *Ricinus communis*, L. Euphorbiaceae, Aamanakku. It is used as a purgative and also as a pain reliever in rheumatism.
93. *Scaevola frutescens*, Kranse. Goodeniaceae. Kolukattai maram. Or vella muttagam. Treatment of beriberi, heart tonic, diuretic
94. *Sida cordata*, (Burm. f.) Borssum. Malvaceae, Thuthi. The leaf juice is effective in treating diarrhea during pregnancy. The pounded leaves are applied locally to relieve cuts and bruises.
95. *Solanum nigrum* L. Solanaceae, Manathakkali. The leaf and fruit extract is used for de-worming and treating fever.
96. *Solanum torvum* Sw. Solanaceae, Sundai-kaai. Powder thus obtained from the shade dried leaves is mixed with hot water or cow's milk and administered orally to get relief from cold.
97. *Stenolobium stans*, D. Don Bignoniaceae. Roots diuretic, tonic, antisyphilitic and vermifuge.
98. *Strychnos vomica* L. Loganiaceae. yetti. It is a sacred tree. It is used in the treatment of rheumatism.
99. *Tamarindus indica* L. Caesalpiniaceae, Puliyamaram. A paste of the seed coat is applied to a scorpion bite to relieve pain or the scratched seed is placed in a warm condition on the area of a scorpion bite to relieve pain.
100. *Tephrosia villosa*, W&A Leguminaceae. Kolloingi. It is used in stomach pain
101. *Thespesia populnea* (L.) Malvaceae, Poovarasu. Tender fruit mixed with castor oil and made in to a paste applied externally for skin disease
102. *Tinospora cordifolia* Miers., Menispermaceae, Seenthilkodi. Shade dried leaves are ground into powder and mixed with hot water and the mixture is taken orally in the treatment of diabetes.
103. *Tribulus terrestris* L. Zygophyllaceae. Neringi. The fruit and root are mixed with boiled raw rice taken orally to prevent white discharge in women abd to treat urinary troubles.
104. *Verbina rigida* L. Verbenaceae root or whole plant crushed for stomach ache
105. *Vicoa indica* DC. Asteraceae. It activity is a herbal contraceptive and possed antifertility
106. *Wrightia tinctoria* L. Apocynaceae, Seed powder and bark are employed in flatulence, worms and colic.
107. *Zizyphus mauritiana* Rhamnaceae. Fruit-cooling astern used in bilious affection. Leaves-applied in scabies and to boils.

Conclusion

These groves function as genetic reservoirs of wild species the pressure on these forests increases. The temples within the groves are still used as places of worship, but the forest surrounding them has become relatively unimportant. In many places strong taboos against biomass extraction no longer exist, while in other places natural resources are removed from the forest under cover of darkness. The rationale behind the reverence for nature and the protective taboo seems to have been forgotten, sometimes even where religious rituals continue to be observed. As such, these groves serve the vital function in preservation of plant species that have become very rare or extinct elsewhere. Tree species Average of 10-70% of growing plants may be

tree species. Most trees are Tamirandus, Albizia, Ervatamia, Wrightia, Gyrocarpus. The results provide evidence of substantial variation in the species content of the sacred groves, which was apparent in both sacred and unprotected stands, introduced an important.

References

1. Mishra BP, Tripathi OP, Tripathi RS, Pandey HN. Effect of anthropogenic disturbance on plant diversity and community structure of a sacred grove in Meghalaya, northeast India. *Biodiversity and Conservation*,2004:13:421-436.
2. Laloo RC, Kharlukhi L, Jeeva S, Mishra BP. Status of medicinal plants in the disturbed and the undisturbed sacred forests of Meghalaya, northeast India: population structure and regeneration efficacy of important tree species. *Current Science*,2006:90:225-232.
3. Ramakrishnan PS, Saxena KG, Chandrashekara UM. *Conserving the Sacred for Biodiversity Management*. Oxford and IBH Publication Co. Pvt. Ltd., New Delhi, 1998.
4. Israel EDOK, Chitra V, Narasimhan D. Sacred Groves: Traditional Ecological Heritage. *International Journal of Ecology and Environmental Sciences*,1997:23:463-470.
5. Jeeva S, Anusuya R. Ancient ecological heritage of Meghalaya. *Magnolia*,2005:3:20-22.
6. Jeeva S, Mishra BP, Venugopal N, Laloo RC. Sacred forests: Traditional ecological heritage in Meghalaya. *Journal of Scott Research Forum*,2005:1:93-97.
7. Gadgil M, Vartak VD. Sacred groves of India: a plea for continued conservation. *Journal of Bombay Natural History Society*,1975:72:314-320.
8. Anbarashan M, Padmavthy A. Ethno-medicinal plants in five sacred groves in Cuddalore district, Tamil Nadu, India. *Ethno-botanical Leaflets*,2010:14:774–780.
9. Sukumaran S. Studies on the scared groves of Kanyakumari district and their values in rural life, PhD dissertation (Mamonmannian Sundaranar University, Tirunelveli, Tamilnadu), 2002.
10. Sukumaran S, Raj ADS. Rare, endemic, Threatened tress and lianas scared groves of Kanyakumari district, *Indian For.*,2007:133(9):1254-1266.
11. Sukumaran S, Jeeva S, Raj ADS, Laloo RC. Rediscovery of *Tectaria Zeilanica* (Tectariopideae) – A Rare fern from Vilavancode sacred grove, Southern Western ghats, India, *Indian For.*,2007a:30(3):331-332.
12. Sukumaran S, Raj ADS, Irudayaraj V, Paulraj K. Enumeration of Pteridophytes in the scared groves of Kanyakumari district –South India, *Indian Fern J.*,2006:23:45-51.
13. Sukumaran S, Regini BGH, Kavitha K, Raj ADS. The floristic composition of scared groves: a functional tool to analyse the mini forest ecosystem, *Indian For*,2007b:131(6):773-785.
14. katharbashya, dhamodaran vijaya (2024) Conservative status of Malayur, Pennagaram Taluk, Dharmapuri.
15. *International Research Journal of Modernization in Engineering Technology and Science* Volume:06/Issue:12 DOI: <https://www.doi.org/10.56726/IRJMETS65458>.