

## Floristic Inventory Of Angiosperms In Ponmalai Hillock Of Kanniyakumari District, Tamil Nadu, India

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### ABSTRACT:

The present study has been carried out in Ponmalai hillock of Kanniyakumari District, Tamil Nadu, India, to document the floristic composition of the study area. Taxonomically, a total of 162 species belonging to 124 genera of 49 families of angiosperms were identified in the Ponmalai hillock of Kanniyakumari District, Tamil Nadu, India. Presently, the status of the Ponmalai hillock is deteriorating under constant anthropogenic pressure. Threat to Ponmalai hillock is discussed in this communication.

**Key words:** Plant diversity, Ponmalai hillock, Tamil Nadu, Western Ghats

### INTRODUCTION

Tropical forests are often referred to as one of the most species diverse terrestrial ecosystems, and generate a variety of natural resources to help sustain the livelihood of local communities (Kumar *et al.*, 2006). The vegetation communities of tropical dry forests have been recognized as comprising some of the most endangered ecosystems in the tropics (Hoekstra *et al.*, 2005). With the increase in human population and intensity of land use these forests are undergoing rapid fragmentation and degradation leading to loss of habitat and erosion of biodiversity (Laurence, 1999; Pimm, 1998). It has been estimated that these forests are disappearing at an alarming rate of 0.8 to 2% per year (May and Stumpf, 2000). Hence quantification and documentation of biodiversity for extant tropical forests becomes a priority activity of the conservation agencies and ecologists as outlined in Rio Convention 1991. A number of authors have worked on the patterns of plant species diversity in the tropical forests of India (Jha *et al.*, 2005; Parthasarathy, 1999, 2001; Roy *et al.*, 2002; Sagar *et al.*, 2003). Parthasarathy (1999, 2001) studied the tree species diversity and distribution in tropical evergreen forests of the Western Ghats in South India and identified anthropogenic disturbance, seed predation and competitive interaction among trees as major factors influencing the diversity.

Despite the vast and varied flora in southern Western Ghats of Tamil Nadu, the biodiversity of the hillocks has not been explored sufficiently. Swamy *et al.* (1998), Williams

(2004), Jeeva *et al.* (2005a, 2005b), Kingston *et al.* (2006), Prakash *et al.* (2006), and Jeeva *et al.* (2006a) have studied the phytodiversity of the region other than hillocks. Nayar (1959), Lawrence (1960), Henry and Swaminathan (1981), Sundarapandian and Swamy (1997), Swamy *et al.* (2000) and Brintha *et al.* (2015) explored the vegetation of Kanniyakumari district, but they paid attention to forests other than hillocks. Floristic diversity and phytosociological study of the fragmented forest patches (representative of hillocks) of Kanniyakumari district are lacking. Therefore, the present study has been undertaken to assess the plant biodiversity and vegetation analysis of fragmented forest hillock of Ponmalai in Kanniyakumari district, Tamil Nadu, India.

## MATERIAL AND METHODS

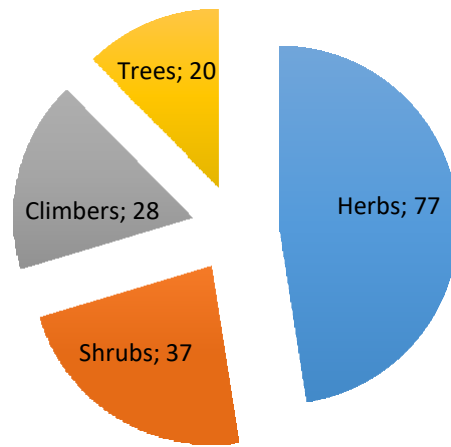
Ponmalai hillock is located about 3 Km west of Nagercoil ( $77^{\circ} 36'$  E and  $8^{\circ} 03'$  N) on the way to Marthandam of Tamil Nadu state, Southern Peninsular India. It covers an area of ca. 49.78 ha. Topographically it has prominent natural features richly varied and crowded, majestic hills with undulating surrounding plains, paddy fields, wetlands and greenish coconut plantation, etc. gave splendid landscapes. The climate of the district is favorable agro-climatic and rainfall varies from 103 cm to 310 cm.

An extensive floristic survey was carried out in the Ponmalai hills at monthly intervals between April 2017 to March 2019. Specimens of flowering plants were collected and identified taxonomically with the help of different floras (Gamble and Fischer 1915 – 1935; Nair and Nayar 1986 – 1987) and by using field keys devised by Pascal and Ramesh (1987). The voucher specimens were deposited at the herbarium of Women's Christian College, Nagercoil.

## Results and Discussion

Taxonomically, a total of 162 species belonging to 124 genera of 49 families was identified in the Ponmalai hills of Kanyakumari District, Tamilnadu, India (Table 1). For all the enumerated angiospermic plant species, information such as botanical name, family, habit, common name, local name and economic importance are provided. Contribution of herbaceous plants to total diversity is the maximum, i.e. 77 species (47.53%), followed by shrubs and undershrubs – 37 species (22.84%), climbers including creeping plants – 28 species (17.28%) and the remaining species were trees (20 species; 12.35%) (Figure 1). The secondary invasive species were confined to the periphery and in disturbed patches of the study area showed the disturbance by cattle grazing and other socio – cultural disturbance.

Fabaceae with 16 species was by far the largest genera (8 genus) in the study area, Euphorbiaceae occupied the second position having 14 species and 8 genera followed by Acanthaceae, Convolvulaceae and Poaceae (9 species each), Lamiaceae and Malvaceae (8 species each), Rubiaceae (7 species), Asclepiadaceae (6 species), Amaranthaceae, Asteraceae and Caesalpiniaceae (5 species each) and three families (Apocynaceae, Commelinaceae and Verbenaceae) having 4 species each. Boraginaceae, Cappariaceae and Cyperaceae (3 species each), 9 families (Aristolochiaceae, Caryophyllaceae, Gentianaceae, Melastomataceae, Menispermaceae, Mimosaceae, Sapindaceae, Sterculiaceae and Tiliaceae) had two species each, whereas 22 families were monospecific (Table 2).



**Figure 1.** Habit-wise distribution of plant species in the study area.

**Table 1.** List of angiospermic plants recorded from the study area

Botanical Name	Family	Common Name	Local Name	Habit	Uses
<i>Abrus precatorius</i> L.	Fabaceae	Rosary pea	Kuntrimuthu	Climber	Medicine
<i>Achyranthes aspera</i> L.	Amaranthaceae	Prickly Chaff flower	Nayuruvi	Herb	Medicine
<i>Andrographis echinoides</i> (L.) Nees	Acanthaceae	False waterwillow	Gopuram Tangi	Herb	Medicine
<i>Apluda mutica</i> L.	Poaceae	Mauritian Grass	Moongil pul	Herb	Fodder
<i>Boerhavia diffusa</i> L.	Nyctaginaceae	Punarnava	Mukkirattai	Creeper	Edible
<i>Abutilon indicum</i> (L.) Sweet	Malvaceae	Indian Abutilon	Thuthi	Herb	Medicine
<i>Abutilon palmeri</i> A.Gray	Malvaceae	Palmer's Indian Mallow	Thuthi	Herb	Medicine
<i>Acalypha indica</i> L.	Euphorbiaceae	Indian Acalypha	Kuppaimeni	Herb	Medicine
<i>Aerva lanata</i> (L.) Juss.	Amaranthaceae	Mountain Knotgrass	Sirukanppelai	Herb	Medicine
<i>Ageratum conyzoides</i> (L.) L.	Asteraceae	Billygoat weed	Pumpillu	Herb	Medicine
<i>Alternanthera sessilis</i> (L.) R.Br. ex DC.	Amaranthaceae	Brazilian spinach	Ponnanganni	Herb	Edible
<i>Alysicarpus monilifer</i> (L.) DC.	Fabaceae	Alyce Clover	Kaasukodi	Herb	Medicine
<i>Alysicarpus vaginalis</i> (L.) DC.	Fabaceae	One-leaved Clover	Perumpulladi	Herb	Medicine
<i>Amaranthus viridis</i> L.	Amaranthaceae	Pigweed	Kuppai keera	Herb	Edible
<i>Anisochilus carnosus</i> (L.f.) Wall.	Lamiaceae	Thick Leaved Lavender	Karppura-valli	Herb	Medicine
<i>Aristolochia indica</i> L.	Aristolochiaceae	Indian Birthwort	Garudakodi	Climber	Medicine
<i>Asystasia gangetica</i> (L.) T.Anderson	Acanthaceae	Creeping Foxglove	Aanaikundrimani	Herb	Medicine
<i>Azadirachta indica</i> A.Juss.	Meliaceae	Neem	Vembu	Tree	Medicine
<i>Berberis aristata</i> DC.	Berberidaceae	Tree Turmeric	Maramanjai	Shrub	Medicine
<i>Biophytum sensitivum</i> (L.) DC.	Oxalidaceae	Tree sensitive plant	Theendanaazhi	Herb	Medicine
<i>Blepharis maderaspatensis</i> (L.) B.Heyne ex Roth	Acanthaceae	Creeping Blepharis	Murivu Porinthe	Creeper	Medicine
<i>Brachiaria eruciformis</i> (Sm.) Griseb.	Poaceae	Loose bushy grass	Erumaipul	Herb	Fodder
<i>Brachiaria remota</i> (Retz.) Haines	Poaceae	Browntop Millet	Pala pul	Herb	Fodder
<i>Calophyllum inophyllum</i> L.	Clusiaceae	Ball tree	Punnai Maram	Tree	Medicine
<i>Calotropis gigantea</i> (L.) Dryand.	Asclepiadaceae	The crown flower	Erukku	Shrub	Medicine
<i>Canthium coromandelicum</i> (Burm.f.) Alston	Rubiaceae	Coromandel Canthium	Sengarai	Tree	Edible
<i>Carissa carandas</i> L.	Apocynaceae	Karanda	Kalakkai	Shrub	Edible
<i>Carissa spinarum</i> L.	Apocynaceae	Wild Karanda	Chirukila	Shrub	Edible

<i>Cassytha filiformis</i> L.	Lauraceae	Love Vine	Pasu kotran	Climber	Medicine
<i>Chromolaena odorata</i> (L.) R.M.King & H.Rob.	Asteraceae	Siam Weed	Venapacha	Herb	Medicine
<i>Cissampelos pareira</i> L.	Menispermaceae	Velvet Leaf	Vatta thiruppi	Climber	Medicine
<i>Cissus quadrangularis</i> L.	Vitaceae	Devil's backbone	Pirandai	Climber	Medicine
<i>Cissus vitiginea</i> L.	Vitaceae	South Indian Treebine	Cempirantai	Climber	Medicine
<i>Cleistanthus collinus</i> (Roxb.) Benth. ex Hook.f.	Euphorbiaceae	Toxic Gooseberry	Oduvanthalai	Tree	Medicine
<i>Cleome gynandra</i> L.	Capparidaceae	Wild Spider Flower	Taivalai	Herb	Medicine
<i>Cleome rutidosperma</i> DC.	Capparidaceae	Fringed spiderflower	Neelavela	Herb	Medicine
<i>Cleome viscosa</i> L.	Capparidaceae	Asian spider flower	Naikkatuku	Herb	Medicine
<i>Clitoria ternatea</i> L.	Fabaceae	Butterfly Pea	Sangu pushpam	Climber	Medicine
<i>Cocculus hirsutus</i> (L.) W.Theob.	Menispermaceae	Broom Creeper	Kattu-k-koti	Climber	Medicine
<i>Coleus forskohlii</i> (Willd.) Briq.	Lamiaceae	Indian Coleus	Marunthu Koorkan	Herb	Medicine
<i>Commelina benghalensis</i> L.	Commelinaceae	Bengal Dayflower	Kanavalai	Herb	Medicine
<i>Commelina diffusa</i> Burm.f.	Commelinaceae	Climbing dayflower	Thaivalai	Herb	Medicine
<i>Corynabutilon vitifolium</i> (Cav.) Kearney	Malvaceae	Huella	Thuthi	Herb	Medicine
<i>Crotalaria juncea</i> L.	Fabaceae	Sunn Hemp	Vakkunnar	Herb	Medicine
<i>Crotalaria laburnifolia</i> L.	Fabaceae	Rattle pod	Kilukuppai	Shrub	Medicine
<i>Crotalaria mysorensis</i> Roth	Fabaceae	Mysore Rattlepod	Kilukuppai	Herb	Medicine
<i>Crotalaria verrucosa</i> L.	Fabaceae	Blue Rattlepod	Kilukuppai	Herb	Medicine
<i>Croton bonplandianus</i> Baill.	Euphorbiaceae	Ban tulsi	Aathuppoondu	Herb	Medicine
<i>Cuscuta reflexa</i> Roxb.	Solanaceae	Dodder	Moodillathalli	Climber	Medicine
<i>Cyanotis axillaris</i> (L.) D.Don ex Sweet	Commelinaceae	Creeping Cradle Plant	Vazhukai Pul	Herb	Fodder
<i>Cyanotis cristata</i> (L.) D.Don	Commelinaceae	Crested Dew-Grass	Kuthirai Kulambadi	Herb	Medicine
<i>Cymbopogon nardus</i> (L.) Rendle	Poaceae	Lemon grass	Kamachi pul	Herb	Medicine
<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Bermuda Grass	Arugampillu	Herb	Medicine
<i>Cyperus rotundus</i> L.	Cyperaceae	Common Nut Sedge	Korai kilangu	Herb	Medicine
<i>Dactyloctenium aegyptium</i> (L.) Willd.	Poaceae	Crowfoot Grass	Kakka kal pul	Herb	Medicine
<i>Delonix elata</i> (L.) Gamble	Caesalpiniaceae	White Gulmohar	Vadanarayani	Tree	Medicine
<i>Desmodium heterophyllum</i> (Willd.) DC.	Fabaceae	Variable-Leaf Desmodium	Porikarappan	Herb	Medicine
<i>Desmodium pryonii</i> DC.	Fabaceae	Tick clover	Toluganni	Shrub	Green manure
<i>Desmodium triflorum</i> (L.) DC.	Fabaceae	Creeping Tick Trefoil	Nilampulladi	Herb	Medicine

<i>Diospyros malabarica</i> (Desr.) Kostel.	Ebenaceae	Indian persimmon	Tumbika	Tree	Medicine
<i>Dodonaea viscosa</i> (L.) Jacq.	Sapindaceae	Hop Bush	Virali	Shrub	Medicine
<i>Ehretia laevis</i> Roxb.	Boraginaceae	Chamror	Kalvirasu	Tree	Medicine
<i>Ehretia microphylla</i> Lam.	Boraginaceae	Fukien Tea	Kodikarai	Shrub	Edible
<i>Elephantopus scaber</i> L.	Asteraceae	Elephant Foot	Anashovadi	Herb	Medicine
<i>Eleusine indica</i> (L.) Gaertn.	Poaceae	Indian goosegrass	Thippa ragi	Herb	Edible
<i>Elytraria acaulis</i> (L.f.) Lindau	Acanthaceae	Asian Scalystem	Pumikatampam	Herb	Medicine
<i>Emilia sonchifolia</i> (L.) DC. ex DC.	Asteraceae	Purple Sow Thistle	Muyalccevi	Herb	Medicine
<i>Enicostema axillare subsp. littorale</i> (Blume) A.Raynal	Gentianaceae	Indian Whitehead	Vellarugu	Herb	Medicine
<i>Eragrostis maderaspatana</i> Bor	Poaceae	Grass	Pullu	Herb	Medicine
<i>Eragrostis viscosa</i> (Retz.) Trin.	Poaceae	Sticky Lovegrass	Pullu	Herb	Fodder
<i>Euphorbia heterophylla</i> L.	Euphorbiaceae	Wild Poinsettia	Ilai mel - rani	Herb	Medicine
<i>Euphorbia hirta</i> L.	Euphorbiaceae	Garden Spurge	Amman pachharisi	Herb	Medicine
<i>Euphorbia neriifolia</i> L.	Euphorbiaceae	Indian spurgetree	Elaikalli	Shrub	Medicine
<i>Euphorbia trigona</i> Mill.	Euphorbiaceae	African milk tree	Kalli	Shrub	Ornamental
<i>Evolvulus alsinoides</i> (L.) L.	Convolvulaceae	Dwarf morning-glory	Vishnukranthi	Herb	Medicine
<i>Evolvulus nummularius</i> (L.) L.	Convolvulaceae	Roundleaf Bindweed	Vishnukiranti	Herb	Medicine
<i>Exacum wightianum</i> Arn.	Gentianaceae	Wight's Persian Violet	Thavalakkalchedi	Shrub	Medicine
<i>Flueggea leucopyrus</i> Willd.	Euphorbiaceae	Bushweed	Mulluppulatti	Shrub	Medicine
<i>Gardenia resinifera</i> Roth	Rubiaceae	Brilliant Gardenia	Tikkamalli	Tree	Medicine
<i>Glinus oppositifolius</i> (L.) Aug.DC.	Aizoaceae	Indian Chickweed	Peru-n-tiray	Herb	Medicine
<i>Gmelina asiatica</i> L.	Verbenaceae	Asian Bushbeech	Mulkumizh	Tree	Medicine
<i>Gomphrena celosioides</i> Mart.	Amaranthaceae	Cockscomb Gomphrena	Neervaadamalli	Herb	Medicine
<i>Grewia flavescens</i> Juss.	Tiliaceae	Donkey Berry	Semparandai	Shrub	Medicine
<i>Grewia heterotricha</i> Mast.	Tiliaceae	Grewia	Achangodi	Climber	Medicine
<i>Gymnema sylvestre</i> (Retz.) R.Br. ex Sm.	Asclepiadaceae	Cowplant	Sirukurinja	Climber	Medicine
<i>Gymnosporia heyneana</i> (Roth) M.A.Lawson	Celastraceae	Spike thorn	Nandu-Narai	Shrub	Medicine
<i>Helicteres isora</i> L.	Sterculiaceae	East-Indian screw tree	valam-puri	Tree	Medicine
<i>Heliotropium indicum</i> L.	Boraginaceae	Indian heliotrope	Telkotukki	Herb	Medicine
<i>Hemidesmus indicus</i> (L.) R. Br. ex Schult.	Asclepiadaceae	Indian Sarsaparilla	Nannari	Climber	Medicine
<i>Hibiscus vitifolius</i> L.	Malvaceae	Grape Leaved Mallow	Mani-tutti	Shrub	Medicine

<i>Holarrhena pubescens</i> Wall. ex G.Don	Apocynaceae	Ivory Tree	Kutaca-p-palai	Tree	Medicine
<i>Hybanthus enneaspermus</i> (L.) F.Muell.	Violaceae	Spade Flower	Orilathamatai	Herb	Medicine
<i>Hyptis suaveolens</i> (L.) Poit.	Lamiaceae	Mintweed	Narachappai	Shrub	Medicine
<i>Ichnocarpus frutescens</i> (L.) W.T.Aiton	Apocynaceae	Black creeper	Manipilaan kodi	Climber	Medicine
<i>Indigofera aspalathoides</i> DC.	Fabaceae	Wiry indigo	Sivanar vaambu	Shrub	Medicine
<i>Indigofera linnaei</i> Ali	Fabaceae	Birdsville Indigo	Cheppu Nerinjil	Herb	Medicine
<i>Indigofera tinctoria</i> L.	Fabaceae	Ceylon Indigo	Avuri	Herb	Medicine
<i>Ipomoea carnea</i> Jacq.	Convolvulaceae	Bush Morning Glory	Oothapoo	Shrub	Miscellaneous
<i>Ipomoea hederifolia</i> L.	Convolvulaceae	Red morning-glory	Kanavalikkodi	Herb	Medicine
<i>Ipomoea nil</i> (L.) Roth	Convolvulaceae	Morning glory	Kakkattan	Climber	Medicine
<i>Ipomoea pes-caprae</i> (L.) R. Br.	Convolvulaceae	Goat's foot Glory	Kadambakodi	Creeper	Fodder
<i>Jasminum angustifolium</i> (L.) Willd.	Oleaceae	Wild jasmine	Kattumalligai	Climber	Medicine
<i>Jatropha glandulifera</i> Roxb.	Euphorbiaceae	Janglerand	Kaatuamanakku	Shrub	Medicine
<i>Jatropha gossypifolia</i> L.	Euphorbiaceae	Barbados nut	Siria-amanakku	Shrub	Medicine
<i>Justicia prostrata</i> (Roxb. ex C. B. Cl.) Gamble	Acanthaceae	Prostrate Justicia	Oduodukki	Herb	Medicine
<i>Justicia tranquebariensis</i> L.f.	Acanthaceae	Tarangambadi Justicia	Thavasimurungai	Shrub	Medicine
<i>Kleinia grandiflora</i> (wallich ex DC.) N.Rani	Asteraceae	Leafy cactus	Muyal kadhu	Shrub	Medicine
<i>Lantana camara</i> L.	Verbenaceae	Lantana	Unni Chedi	Climber	Edible
<i>Lepidagathis cristata</i> Willd.	Acanthaceae	Crested Lepidagathis	Karappanpoondy	Herb	Medicine
<i>Leucaena leucocephala</i> (Lam.) de Wit	Mimosaceae	Horse Tamarind	Peru-n-takarai	Tree	Fodder
<i>Leucas aspera</i> (Willd.) Link	Lamiaceae	Common Leucas	Siru-Thumbai	Herb	Medicine
<i>Lipocarpha gracilis</i> (Rich. ex Pers.) Nees	Cyperaceae	Cyperus	Korai	Herb	Fodder
<i>Ludwigia perennis</i> L.	Onagraceae	Ludwigia	Neerkarayambu	Herb	Medicine
<i>Martynia annua</i> L.	Acanthaceae	Devil's claw	Kakkamookkuchedi	Shrub	Medicine
<i>Melastoma malabathricum</i> L.	Melastomataceae	Malabar melastome	Thodukkara	Shrub	Edible
<i>Melochia corchorifolia</i> L.	Sterculiaceae	Chocolate Weed	Pinnakkukkirai	Herb	Medicine
<i>Merremia tridentata</i> (L.) Hallier f.	Convolvulaceae	African morning vine	Mudhiyaarkoondhal	Climber	Medicine
<i>Merremia vitifolia</i> (Burm. f.) Hallier f.	Convolvulaceae	Grape-leaf Wood Rose	Manja vayaravalli	Climber	Medicine
<i>Millingtonia hortensis</i> L.f.	Bignoniaceae	Tree Jasmine	Panneerpoo	Tree	Ornamental
<i>Mimosa pudica</i> L.	Mimosaceae	Touch Me Not	Thotta sinungi	Climber	Medicine
<i>Mimusops elengi</i> L.	Sapindaceae	Bullet wood	Magizham	Tree	Medicine

<i>Morinda citrifolia</i> L.	Rubiaceae	Great Morinda	Manjanathi	Tree	Medicine
<i>Morinda pubescens</i> Sm.	Rubiaceae	Morinda	Manchanari	Tree	Medicine
<i>Mundulea sericea</i> (Willd.) A.Chev.	Fabaceae	Silver bush	Vellaipurasu	Tree	Medicine
<i>Ocimum americanum</i> L.	Lamiaceae	Common basil	Nai Thulasi	Herb	Medicine
<i>Ocimum basilicum</i> L.	Lamiaceae	Sweet basil	Kattu Tulasi	Herb	Medicine
<i>Opuntia dillenii</i> (Ker Gawl.) Haw.	Cactaceae	Opuntia	Chappatigalli	Shrub	Edible
<i>Orthosiphon aristatus</i> (Blume) Miq.	Lamiaceae	Java tea	Poochameesa	Herb	Medicine
<i>Orthosiphon thymiflorus</i> (Roth) Sleseen	Lamiaceae	Thyme Java Tea	Chilantippatam	Shrub	Medicine
<i>Osbeckia minor</i> Triana	Melastomataceae	Small-Leaf Osbeckia	Cherukadhali	Shrub	Ornamental
<i>Passiflora foetida</i> L.	Passifloraceae	Stinking Passion flower	Kurangupazham	Climber	Edible
<i>Pavonia odorata</i> Willd.	Malvaceae	Fragrant Pavonia	Peramutti	Shrub	Medicine
<i>Pedaliium murex</i> L.	Pedaliaceae	Large Caltrops	Yanai nerunji	Herb	Medicine
<i>Pergularia daemia</i> (Forssk.) Chiov.	Asclepiadaceae	Pergularia	Veliparutthi	Herb	Medicine
<i>Phyllanthus amarus</i> Schumach. & Thonn.	Euphorbiaceae	Carry Me Seed	Keezhanelli	Herb	Medicine
<i>Phyllanthus maderaspatensis</i> L.	Euphorbiaceae	Madras Leaf-Flower	Nila-nelli	Herb	Medicine
<i>Phyllanthus reticulatus</i> Poir.	Euphorbiaceae	Black-Honey Shrub	Pullaanthi	Climber	Edible
<i>Polycarpaea corymbosa</i> (L.) Lam.	Caryophyllaceae	Old Man's Cap	Nilaisedachi	Herb	Medicine
<i>Polycarpon prostratum</i> (Forssk.) Asch. & Schweinf.	Caryophyllaceae	Prostrate Manyseed	Vayal poondu	Herb	Medicine
<i>Polygala erioptera</i> DC.	Polygalaceae	Woolly-Winged Milkwort	Paruppu chedi	Herb	Medicine
<i>Premna tomentosa</i> Willd.	Verbenaceae	Bastard Teak	Malaithaekku	Shrub	Medicine
<i>Psyrdrax dicoccos</i> Gaertn.	Rubiaceae	Ceylon Boxwood	Nanjul	Tree	Medicine
<i>Remirea maritima</i> Aubl.	Cyperaceae	Riverine cyperus	Attukorai	Herb	Miscellaneous
<i>Rhynchosia rufescens</i> (Willd.) DC.	Fabaceae	Rusty Snoutbean	Kaattukollu	Shrub	Fodder
<i>Ricinus communis</i> L.	Euphorbiaceae	Castor bean	Amanakku	Shrub	Medicine
<i>Rivea hypocrateriformis</i> Choisy	Convolvulaceae	Common night glory	Musuttai Kodi	Climber	Edible
<i>Rubia cordifolia</i> L.	Rubiaceae	Indian madder	Poovathu	Climber	Medicine
<i>Rungia repens</i> (L.) Nees	Acanthaceae	Creeping Rungia	Tavacu-murunkai	Herb	Medicine
<i>Sansevieria roxburghiana</i> Schult. & Schult.f.	Liliaceae	Indian bowstring-hemp	Marul	Herb	Medicine
<i>Santalum album</i> L.	Santalaceae	Sandal wood	Chanthanam	Tree	Medicine
<i>Sarcostemma acidum</i> (Roxb.) Voigt	Asclepiadaceae	Moon creeper	Kotikkalli	Climber	Medicine
<i>Secamone emetica</i> (Retz.) R. Br. ex Schult.	Asclepiadaceae	Emetic Secamone	Nilamarandaikodi	Climber	Miscellaneous



<i>Senna alata</i> (L.) Roxb.	Caesalpiniaceae	Candle Bush	Seemaiagathi	Shrub	Medicine
<i>Senna auriculata</i> (L.) Roxb.	Caesalpiniaceae	Tanner's Cassia	Avaram	Shrub	Medicine
<i>Senna occidentalis</i> (L.) Link	Caesalpiniaceae	Coffee Senna	Payaverai	Herb	Medicine
<i>Senna siamea</i> (Lam.) H.S.Irwin & Barneby	Caesalpiniaceae	Siamese Senna	Manjal konrai	Tree	Medicine
<i>Sida acuta</i> Burm.f.	Malvaceae	Morning mallow	Arivalmukkan	Herb	Medicine
<i>Sida cordifolia</i> L.	Malvaceae	Country Mallow	Kurunthotti	Shrub	Medicine
<i>Sida rhombifolia</i> L.	Malvaceae	Cuban Jute	Chitamutti	Herb	Medicine
<i>Tarenna asiatica</i> (L.) Kuntze ex K.Schum.	Rubiaceae	Asiatic Tarenna	Tharani	Shrub	Medicine
<i>Thottea barberi</i> (Gamble) Ding Hou	Aristolochiaceae	Barber's Thottea	Kuruvanmooli	Shrub	Medicine
<i>Volkameria inermis</i> L.	Verbenaceae	Indian privet	Shangu-kuppi	Shrub	Medicine

**Table 2.** Family wise distribution of plant species in the study area

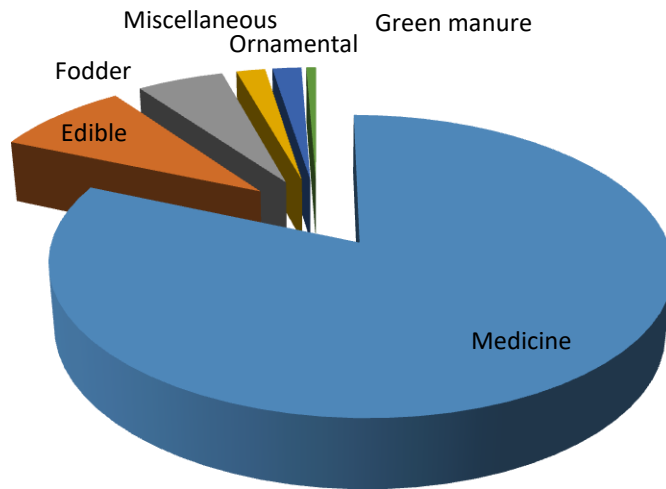
Family Rank	Family	Genus	Species
1	Fabaceae	8	16
2	Euphorbiaceae	8	14
3	Acanthaceae	8	9
4	Convolvulaceae	4	9
5	Poaceae	7	9
6	Lamiaceae	6	8
7	Malvaceae	5	8
8	Rubiaceae	6	7
9	Asclepiadaceae	6	6
10	Amaranthaceae	5	5
11	Asteraceae	5	5
12	Caesalpinaceae	2	5
13	Apocynaceae	3	4
14	Commelinaceae	2	4
15	Verbenaceae	4	4
16	Boraginaceae	2	3
17	Capparidaceae	1	3
18	Cyperaceae	3	3
19	Aristolochiaceae	2	2
20	Caryophyllaceae	2	2
21	Gentianaceae	2	2
22	Melastomataceae	2	2
23	Menispermaceae	1	2
24	Mimosaceae	2	2
25	Sapindaceae	2	2
26	Sterculiaceae	2	2
27	Tiliaceae	2	2
28	Aizoaceae	1	1
29	Berberidaceae	1	1
30	Bignoniaceae	1	1
31	Cactaceae	1	1
32	Celastraceae	1	1
33	Clusiaceae	1	1
34	Ebenaceae	1	1
35	Lauraceae	1	1

36	Liliaceae	1	1
37	Meliaceae	1	1
38	Nyctaginaceae	1	1
39	Oleaceae	1	1
40	Onagraceae	1	1

Table 2. Continued...

Family Rank	Family	Genus	Species
41	Oxalidaceae	1	1
42	Passifloraceae	1	1
43	Pedaliaceae	1	1
44	Polygalaceae	1	1
45	Santalaceae	1	1
46	Solanaceae	1	1
47	Sterculiaceae	1	1
48	Violaceae	1	1
49	Vitaceae	1	1
<b>Grand Total</b>		<b>124</b>	<b>162</b>

The plants recorded from the Ponmalai hillock of Kanniyakumari district are economically important in terms of the use as non-timber forest produce. The medicinal plant ranked first with 132 species, 14 species having edible value, 9 species had fodder value, 3 species each were regarded for ornamental and miscellaneous uses and a species is used for green manure. Many multipurpose species were also reported from the study area. Of these, 14 species are used as medicine and edible purposes (Figure 2).



**Figure 2.** Diversity of economically important plants of the study area.

Presently, the health of the Ponmalai hillock is deteriorating under constant anthropogenic pressure. Constant grazing, extraction of fuel-wood, collection of medicinal plants and non-wood forest products etc. are affecting the biodiversity of the study area. Pilgrimage also the major threat to this forest. These disturbances are also a threat for various rare, vulnerable and threatened plants of this sacred mountain. Currently, the forest is maintained and managed by the catholic priests and this being a non-sacred protection, the locals are not co-operating. Therefore, the government should either declare these forests as preservation sites, incorporate them into modern conservation systems, to promote community-based conservation of biodiversity or administration of these forests should be handed over to Church authorities. This will not only protect the diversity of the Ponmalai hillock, but also improve the deteriorating vegetation.

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